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JACOBI'S ATLAS OF DERMOCHROMES

JACOBI'S ATLAS
OF
DERMOCHROMES

WITH
ENTIRELY NEW AND ORIGINAL TEXT

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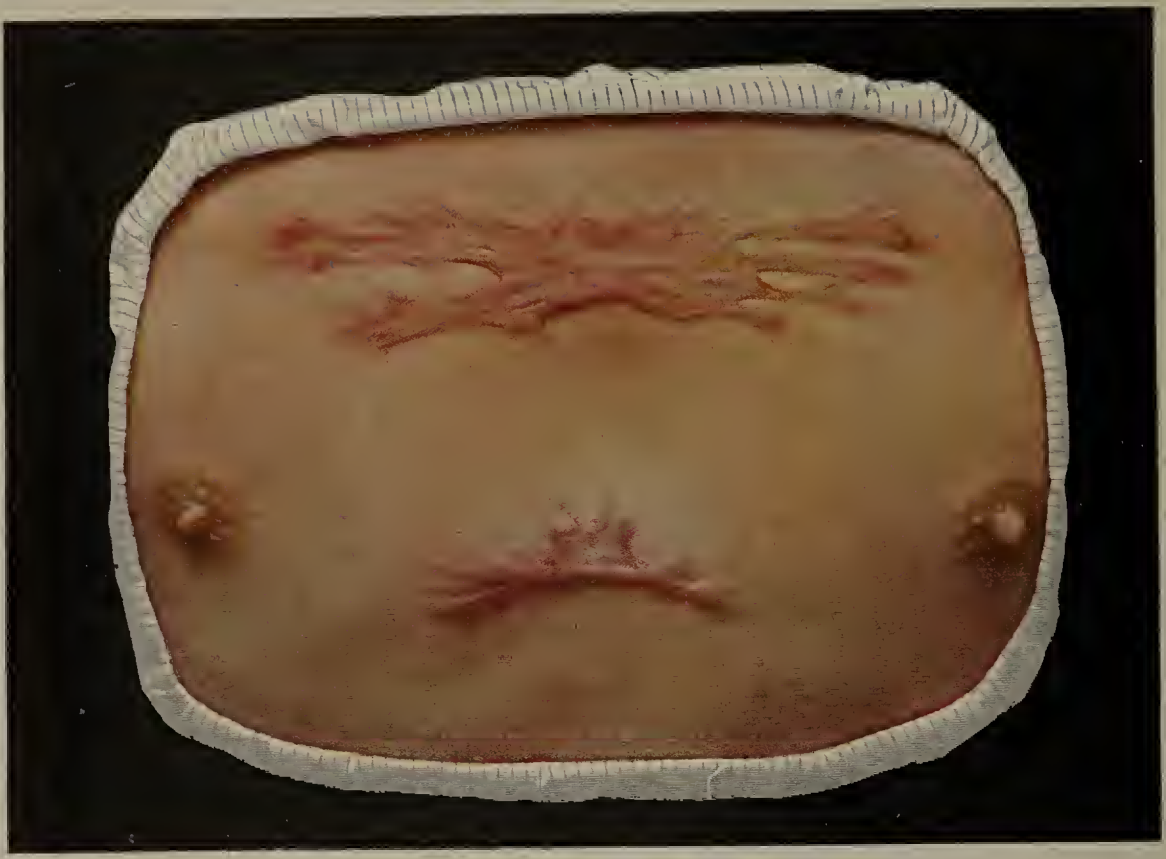

Fig. 148. Keloid

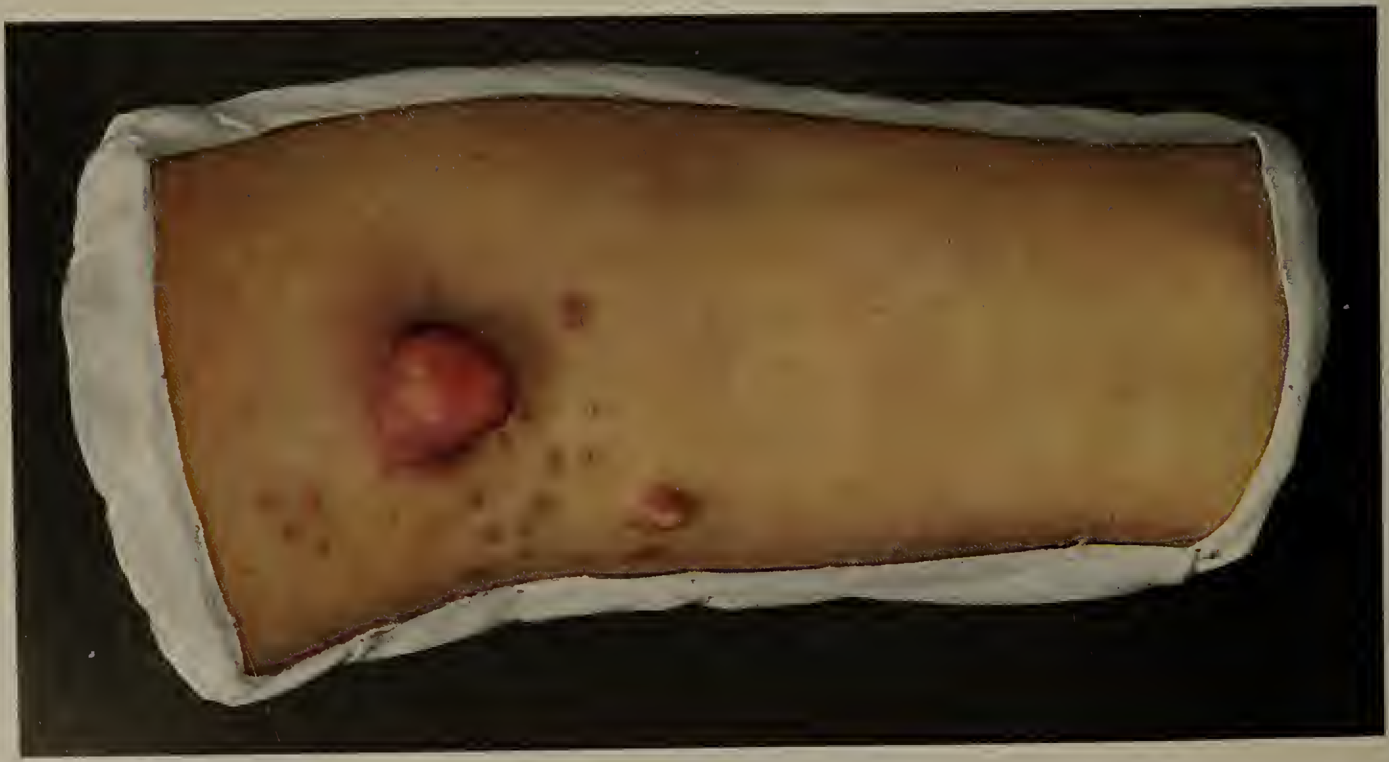

Fig. 149. Dermatomyoma multiplex

ATLAS OF DERMOCHROMES

Tumours

Keloid (Plate 80, Fig. 148)

The name keloid was given by Alibert to certain dense, claw-like fibromata. Two types were originally distinguished—idiopathic (true), and scar (false) keloids—but this distinction is no longer made, as the process in both is essentially similar. The condition may result from the most trivial injury to the skin, or may develop on cicatrices from burns or vaccination, or follow the lesions of tuberculosis, syphilis, and acne. In the negro races a special predisposition to keloid formation exists. The elements may be single or multiple, and any part of the body is liable to be affected.

A characteristic variety is seen over the sternum as a white, or pink, band of tissue, from which as a rule numerous claw-like prolongations extend outwards (Fig. 148). Round or oval sharply circumscribed keloids are also met with—for example, upon a vaccination scar. The individual lesions begin as slightly marked elevations which increase gradually, and, after reaching a certain size, remain stationary, or even undergo spontaneous resolution. Subjective sensations are not, as a rule, complained of, but there may be tenderness or itching, or even severe neuralgic pains.

Treatment

Since the introduction of X-rays and radium the treatment of keloid has been much simplified, for very good results can be obtained by radiotherapy without pain or discomfort to the patient. Where such remedies are not available, electrolysis, or multiple scarification, may be used. Excision is generally followed by recurrence in the scar, and is therefore not to be recommended.

Dermatomyoma Multiplex (Multiple Cutaneous Leiomyomata) (Plate 80, Fig. 149)

This very rare tumour is composed of non-striped muscle derived from the fibres of the arrector pili, or from the muscular wall of the vessels of the skin. The lesions appear at any age in the form of reddish-brown, firm nodules, either singly, in groups, or distributed over the face and body irregularly. Painful sensation may only be experienced on pressure or friction, or may be of a paroxysmal character. Although the nature of the lesion may be suspected from its objective characters and tenderness, diagnosis can usually only be established by the microscopic examination of a nodule removed for this purpose.

Treatment is carried out by electrolysis, or the tumours may be excised.

Xanthoma (Plates 81 and 82, Figs. 150 to 153)

The name xanthoma, with its synonym vitiligoidea, is applied to certain tumour-like bodies of a yellow or pink colour occurring on the face, trunk, and elsewhere, due to the deposit of a lipoid substance in the tissues with a secondary fibrous reaction.

Three clinical varieties are described; they should not be regarded as separate entities, for their pathogenesis is similar and their relationship is further shown by the occasional association of two different forms.

Xanthoma Tuberosum Multiplex (Figs. 150 and 152).—This somewhat rare variety is met with at all ages. The lesions vary from small yellow, or red, papules to nodules the size of a nut, or larger, often surrounded by an erythematous area (Fig. 152). Even in the more definitely red lesions, the yellow tint can be demonstrated if the blood-vessels are emptied by pressure with a glass slide. The elements vary in the sensation they impart to the finger, some being elastic and soft, others so hard as to suggest a keloid. Although the general evolution is slow, it is characteristic for a series of crops to appear (eruptive xanthoma), and for the lesions to be found on points of pressure or friction, such as the knuckles, elbows, knees, buttocks, and scalp. Plaques sometimes occur about the eyes, as in xanthoma palpebrarum; xanthomatous lesions may also develop on the tendon sheaths and on mucous membranes.

Xanthoma Diabeticorum is regarded by many as a variant of the disease occurring in persons suffering from diabetes mellitus or insipidus, or from glycosuria; more often the last. The lesions tend to appear acutely, and may clear up and relapse in a manner not seen in xanthoma tuberosum multiplex. General treatment of the glycosuria by insulin and in other ways promotes their disappearance.

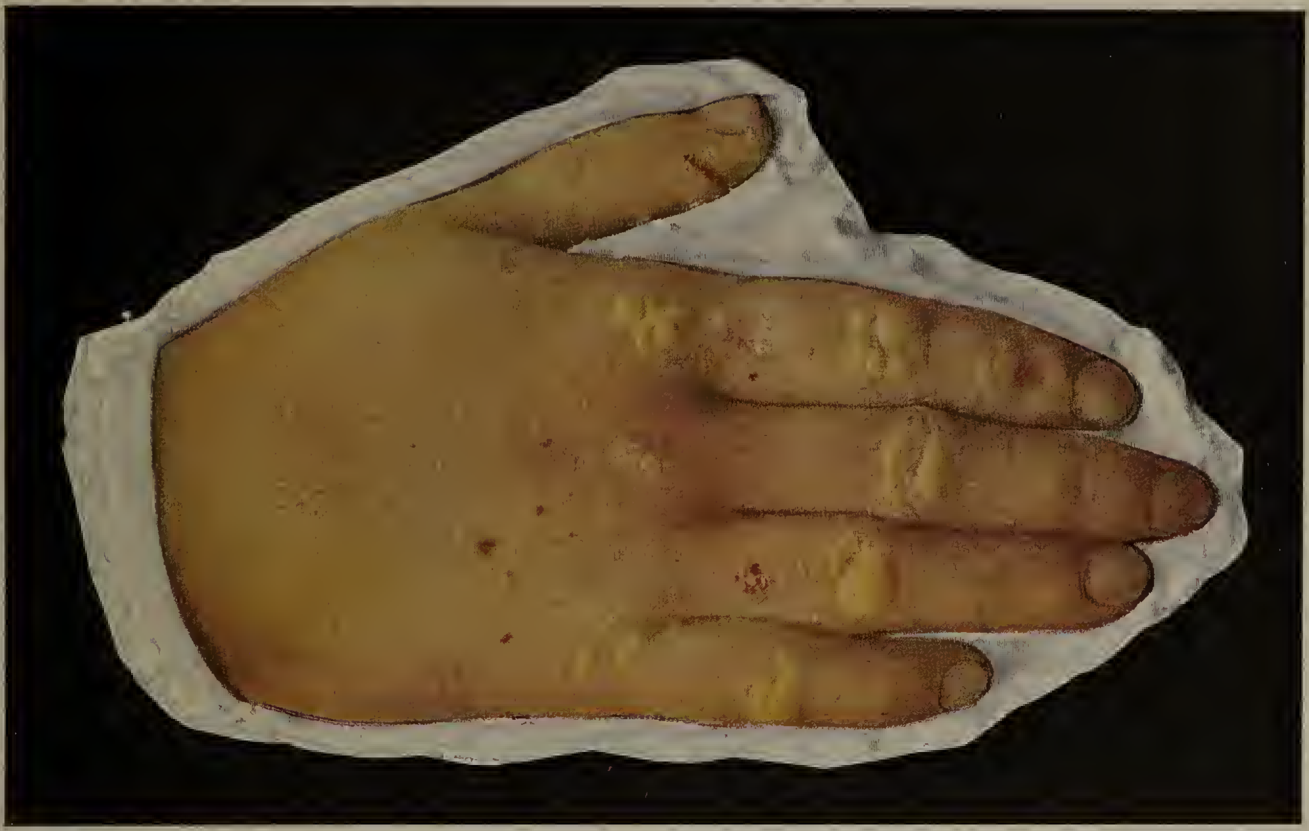

Fig. 150. Xanthoma tuberosum multiplex

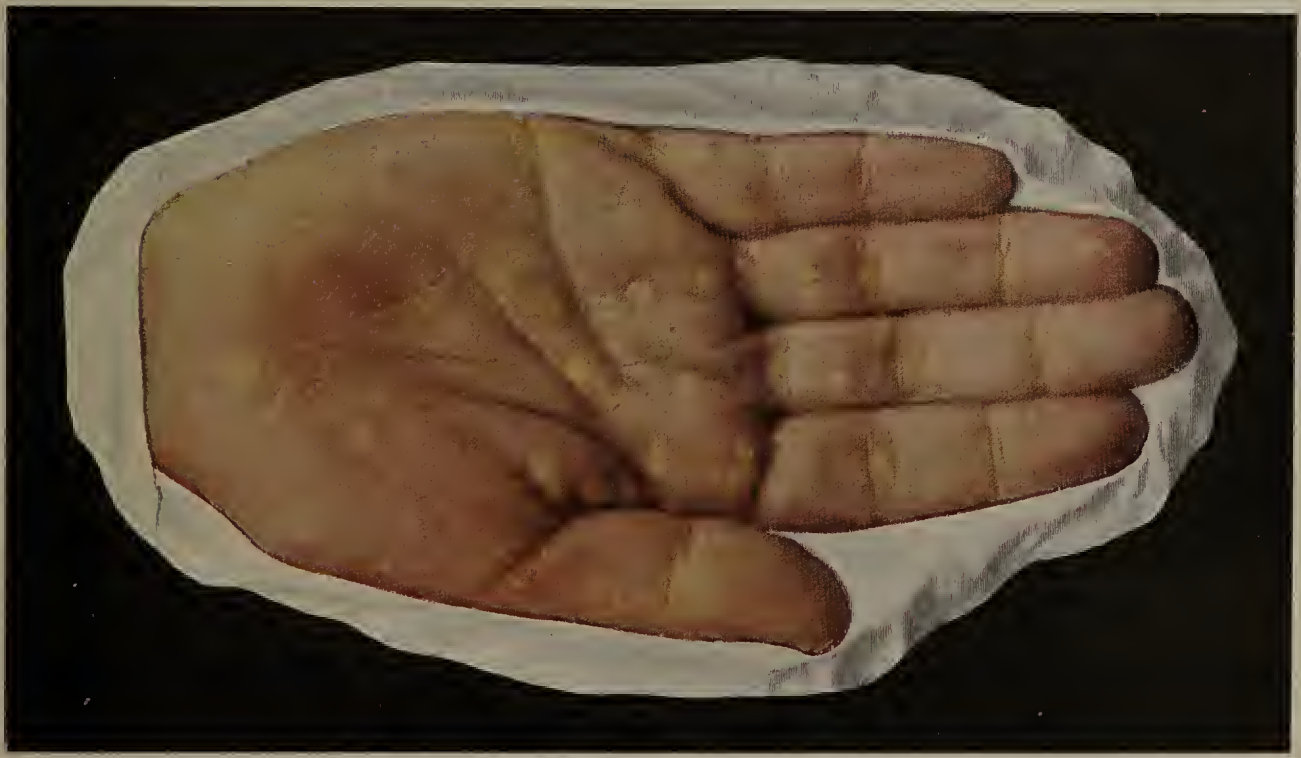

Fig. 151. Xanthoma planum volae manus

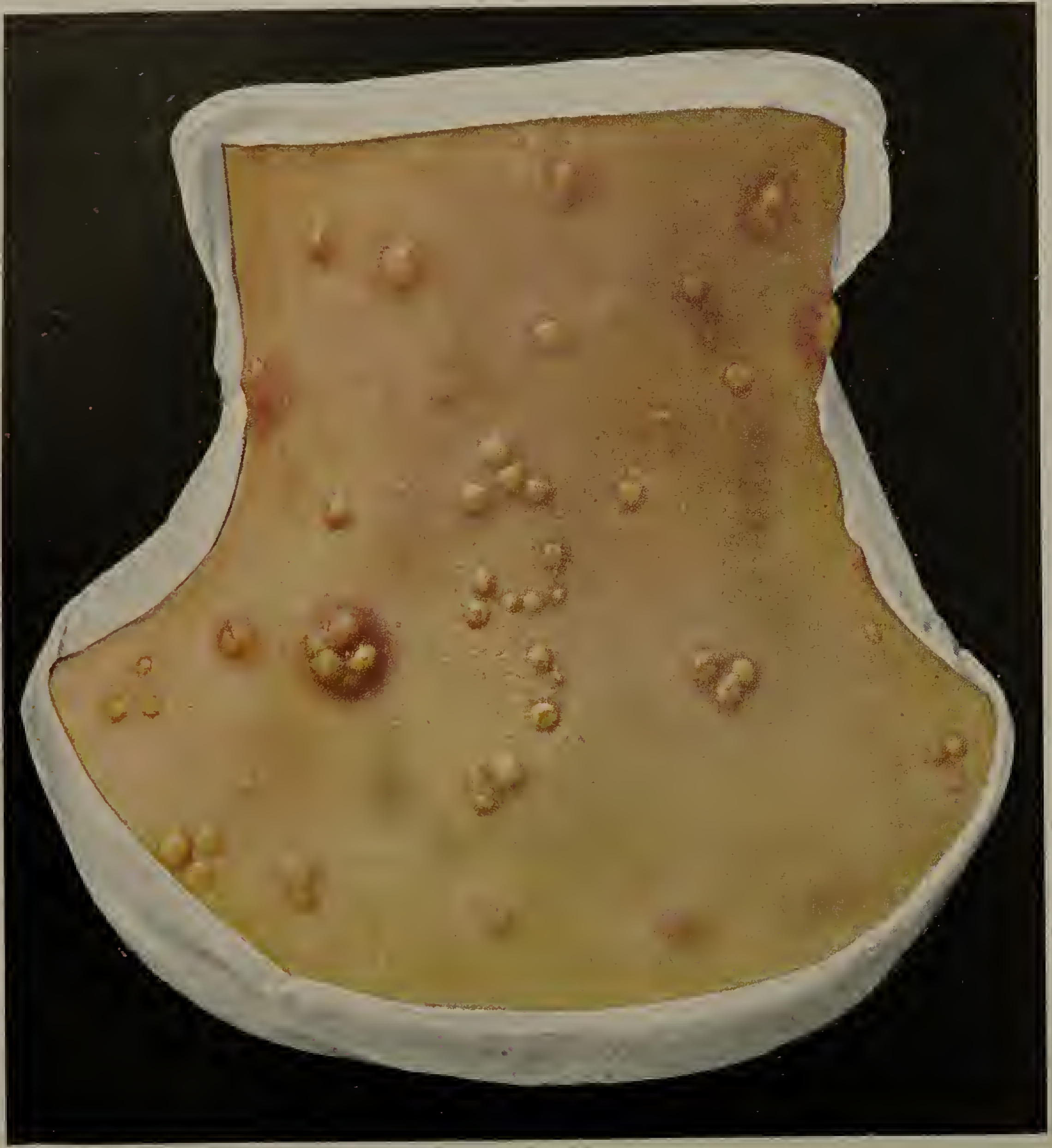

Fig. 152. Xanthoma tuberosum multiplex

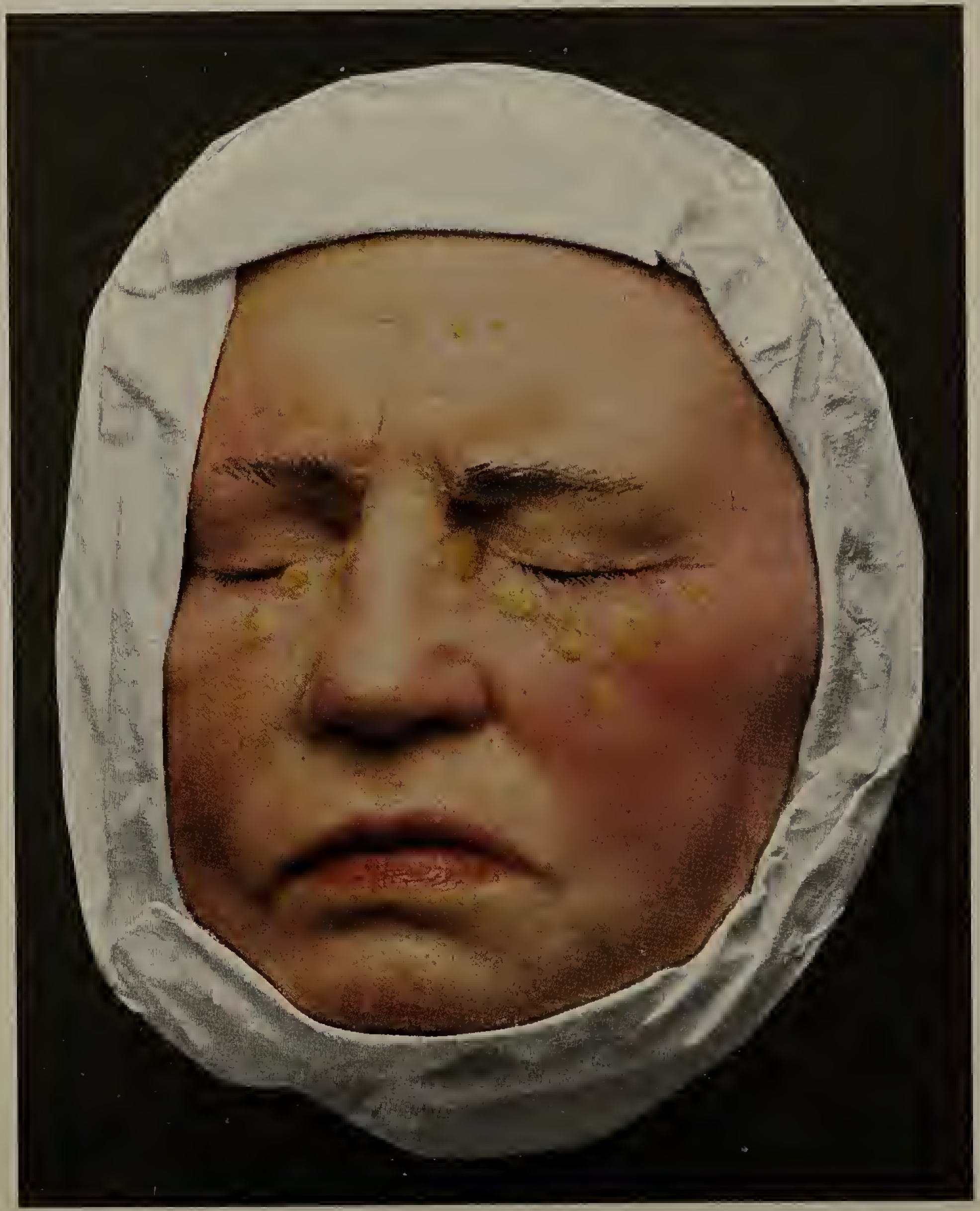

Fig. 153. Xanthoma palpebrarum

Xanthoma Palpebrarum: Xanthoma Planum (Figs. 151 and 153).—This form is usually seen about the eyes (xanthelasma), or occasionally elsewhere, as on the palms (Fig. 151). The lesions appear on the upper and lower lids, in the neighbourhood of the inner canthus, as soft, flat, yellow patches, with the appearance of being let into the skin; in extensive cases they may almost surround the eye.

Xanthoma palpebrarum affects adults, and is much more commonly met with in the female sex. Politzer believes that the condition, when it affects the eyelids, results from a special form of fatty degeneration of the muscles; this is not generally accepted, and seems improbable in view of the occurrence of xanthoma palpebrarum simultaneously with other varieties of the disease.

Etiology and Pathology

In a microscopic section made from a xanthoma papule, certain peculiar cells (xanthoma cells) are observed, generally arranged concentrically about the vessels of the dermis. These cells are multinucleated, and some of them bear a close resemblance to a giant cell. They contain a peculiar fat-like substance, not a true fat, but a cholesterol ester, in granules and droplets, and this is also deposited in the spaces between the cells. The association of xanthoma with jaundice, diabetes, and cirrhosis of the liver has long been recognised, but not until it had been shown that in these conditions, and also in the more extensive forms of xanthoma, a hypercholesterolæmia existed was the true significance of the association understood. In these various states the blood cholesterol may rise from 0·1 or 0·2 per cent. to double or treble this amount, and this may provide an explanation of the deposit of the fat-like substance in the skin. The xanthoma tumour results from its presence, and from the fibrous and other reactions it causes.

Treatment

Treatment is most often demanded in xanthoma palpebrarum, because of the disfigurement it causes. In some cases the lesions can be removed, or at least made less obvious, by electrolysis or radium. The condition is generally progressive, and therefore excision is only of temporary benefit. The eruption can often be satisfactorily disguised by spectacles with a tortoise-shell frame. For the lesions in other situations, X-rays or the galvano-cautery are employed. None of these methods of treatment is entirely satisfactory, as the cause, the hypercholesterolæmia, remains.

Keratosis Senilis (Plate 83, Fig. 154)

A degenerative condition of the skin observed on the face and backs of the hands of elderly individuals—that is, on regions particularly exposed to the effects of light. The eruptive elements consist of brown or red spots, which become covered with a dry, adherent, brown crust. Some of the lesions may be distinctly atrophic and show telangiectases and pigmentation, resembling mild radio-dermatitis. Senile keratosis is a genuine pre-cancerous dermatosis, and may be the starting-point of one or more epitheliomata. By some it is considered to be related to, if not identical with, the seborrhœic warts often observed on the back and chest; from them it differs in its peculiar tendency to malignant degeneration, its distribution, and the age at which it develops.

In view of their liability to malignant degeneration, treatment should remove, but not irritate, the lesions. X-rays often prove successful, or the individual elements may be treated with the cautery, or frozen with CO_2 snow.

Xerodermia Pigmentosa (Plate 83, Fig. 155)

A very rare affection beginning in early childhood, with peculiar pigmentary and atrophic changes in the exposed skin. The earliest manifestation consists in marked freckling of the uncovered regions of the body during the summer or spring. These pigmentary macules do not disappear during the cold weather, but persist and gradually increase in number; other changes in the form of atrophic spots and telangiectases are noted later. A number of warty papules then make their appearance, many of which wither, become detached, and leave a scar; others sooner or later undergo a malignant change, with invasion of the lymphatic glands.

Etiology and Pathology

The disease appears to be due to a peculiar sensitiveness to the actinic, and possibly also to the heat rays of the sun. The histological changes vary in accordance with the type of eruptions examined—pigmentary, atrophic, or warty. When malignant degeneration occurs, it may assume either the "basal-cell" type or the "prickle-cell" type of cancer. The disease is fortunately a rare one, and may affect a single individual only or several members of a family.

Treatment

Treatment is purely palliative. Attempts should be made to protect the individual from actinic light, either by coloured veils or by yellow

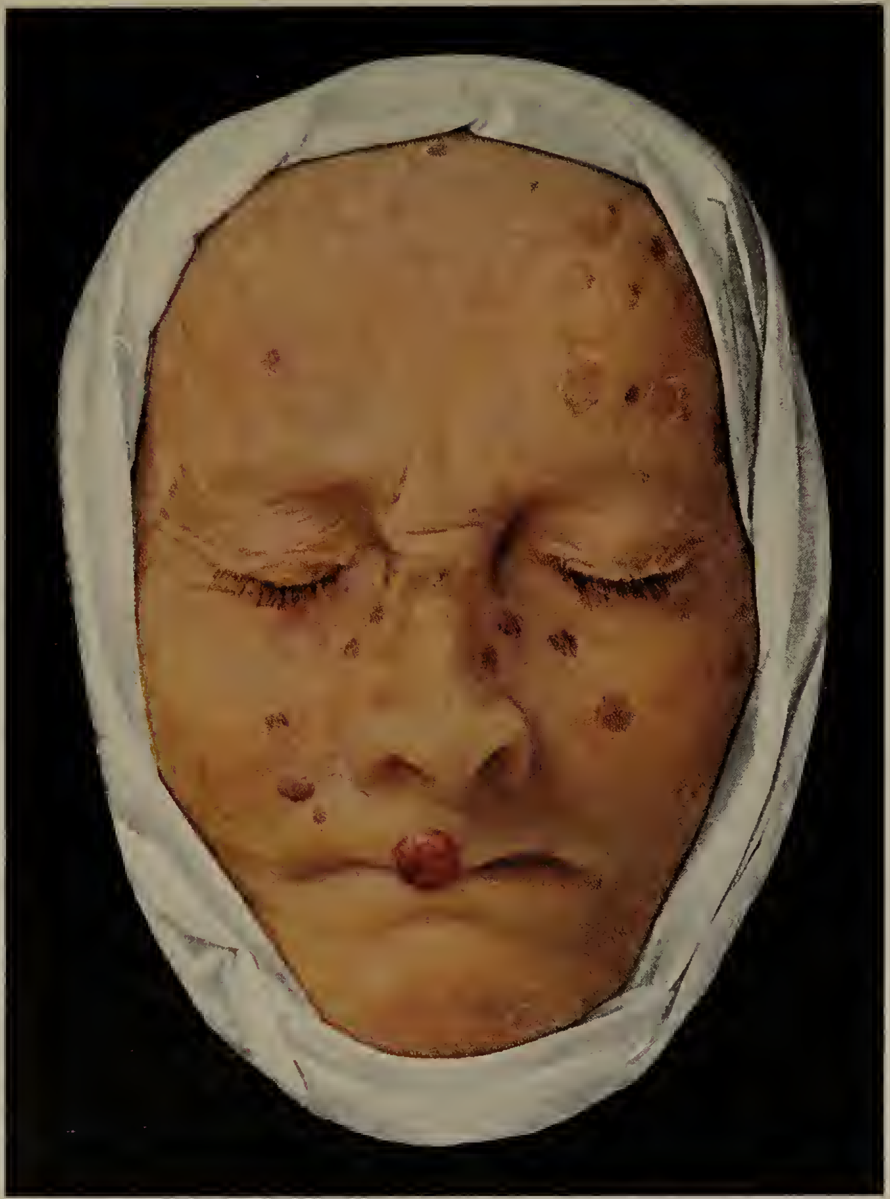

Fig. 154. Keratosis senilis

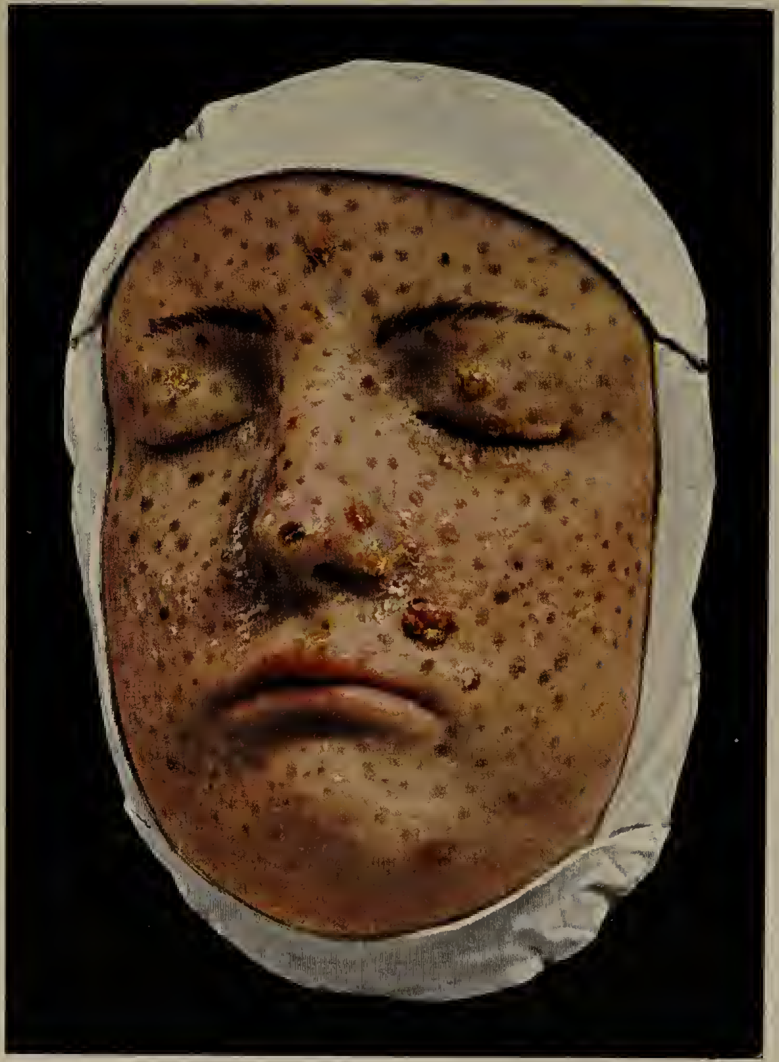

Fig. 155. Xerodermia Pigmentosa

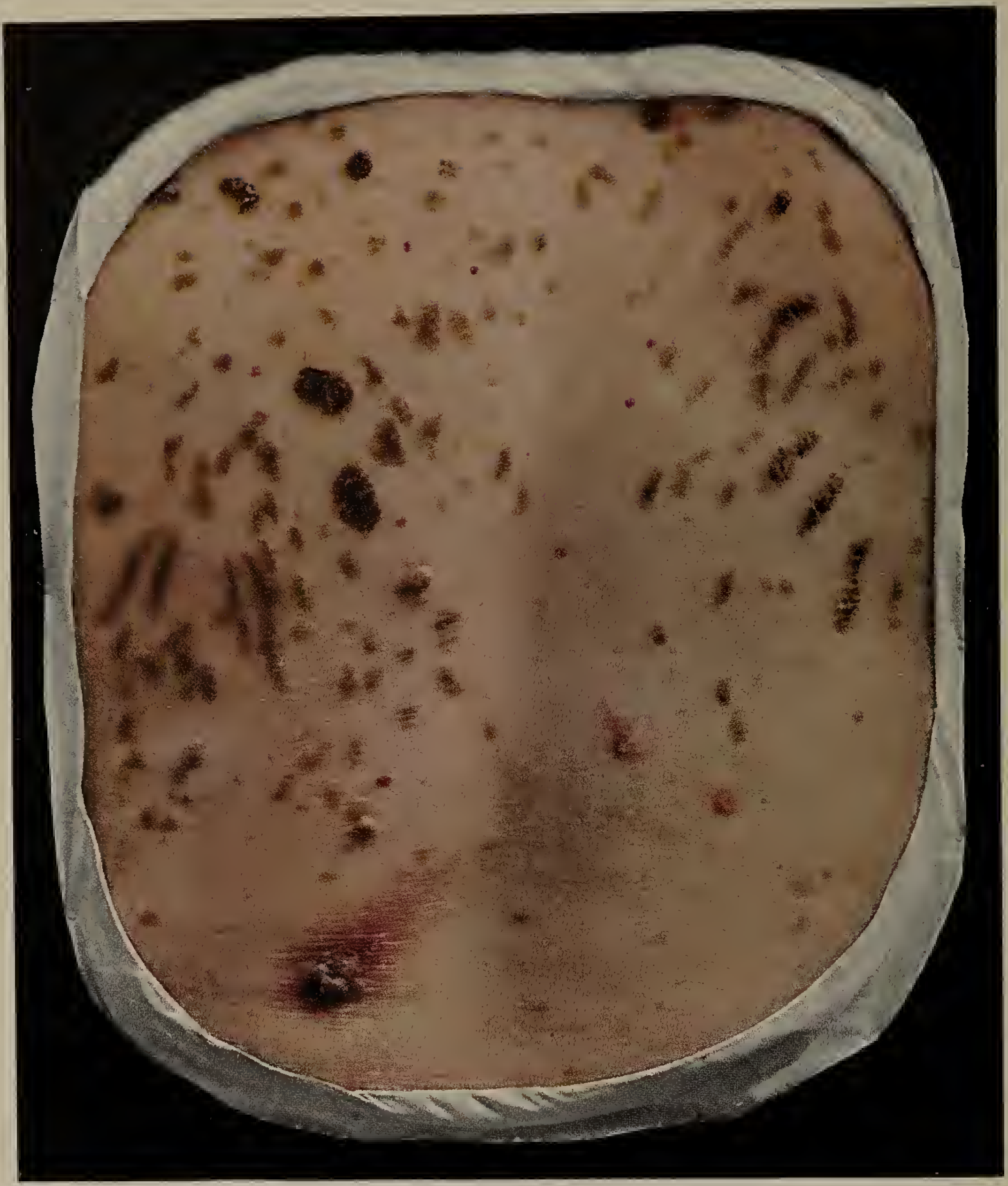

Fig. 156. Verrucae seniles

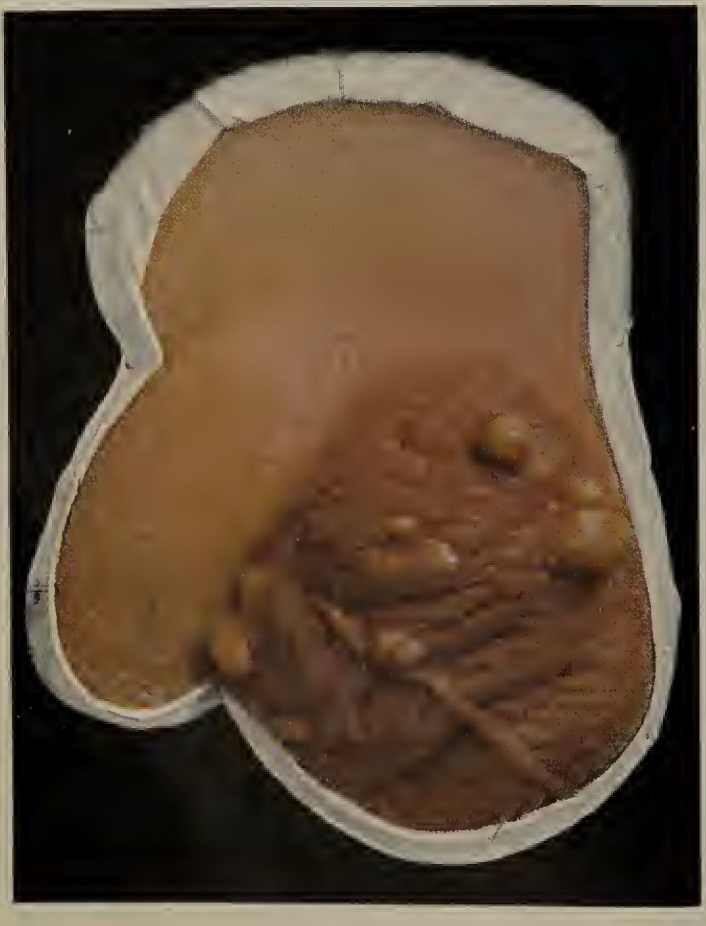

Fig. 157. Cystes sebaceae

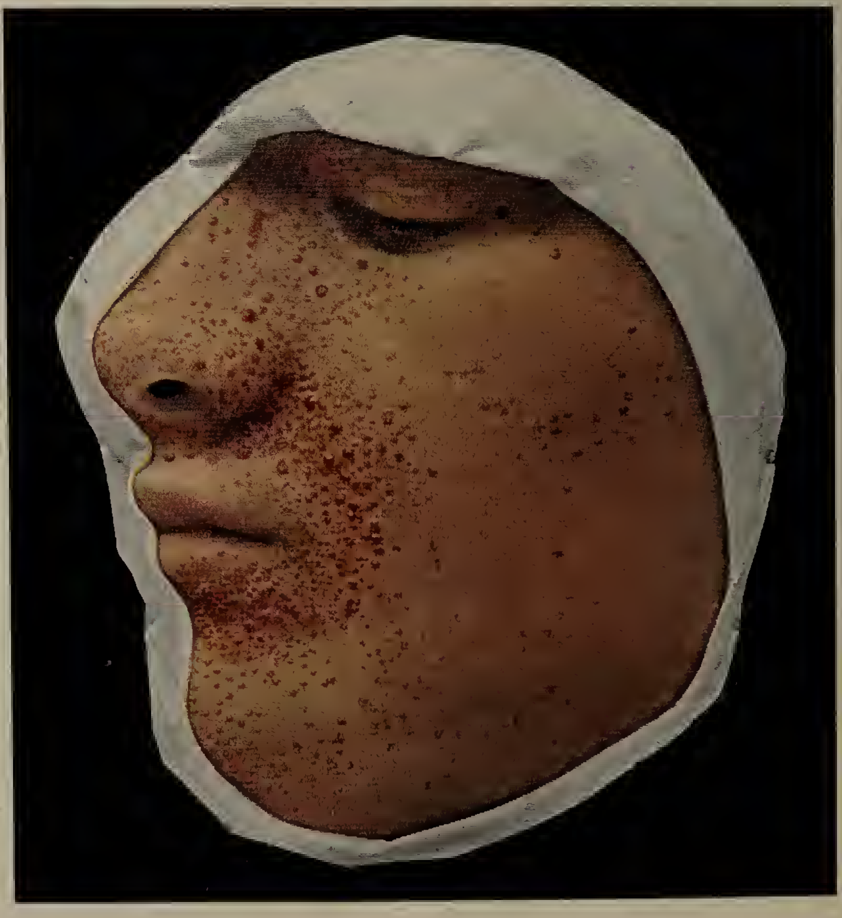

Fig. 158. Adenoma sebaceum

vaseline, a substance which, as Peacock has shown, is capable of absorbing ultra-violet radiations. In a case under the care of the late Dr. Pringle and the writer, the malignant growths were successfully treated by radium, but in view of their histological structure excision is preferable.

Verrucæ Senilis (Plate 84, Fig. 156)

Senile or seborrhœic warts are frequently met with in middle-aged individuals on the trunk, neck, and elsewhere. The lesions are usually present in considerable numbers, and appear as flat elevations, round or irregular in shape, covered with a greasy adherent crust of a brown, gray, or even black colour. If this crust is scraped off, the surface beneath is found to be uneven and granular, and bleeds when the manipulation is performed roughly. Darier is of the opinion that these so-called seborrhœic warts are nævi of late development, and he calls attention to their association with other similar nævoid structures, such as pigmentary patches (pigmentary nævi), small fibromata (skin tags), and the peculiar red vascular spots observed on the body of many individuals. Seborrhœic, or senile, warts are distinguished from senile keratosis (Fig. 154), for which they are often mistaken, by their different distribution, earlier onset, and by the rarity with which they undergo malignant degeneration. The treatment is difficult, for each lesion has to be separately dealt with, either by the cautery or by CO_2 snow. The condition is progressive, and nothing can be done to prevent the development of new elements.

Cystes Sebaceæ (Plate 84, Fig. 157)

Sebaceous cysts are not uncommonly met with on the scalp or scrotum as multiple, soft, globular masses, over which the skin—generally unaltered—is stretched. The contents resemble soft putty, and are made up of a variety of ingredients. In the larger forms it is usually impossible to detect any orifice, and for this reason it has been suggested that such cysts are the result of embryonic cellular inclusions. In the smaller forms, occurring especially on the penis and vulva, the condition is due to blocking of the sebaceous duct, which can often be seen plugged with a comedo (retention cysts). The treatment of the larger lesions is surgical; in the smaller lesions spontaneous recovery sometimes follows accidental secondary infection.

Adenoma Sebaceum (Plate 84, Fig. 158)

Two types of this rare disease are met with—one where the elevations are pale (Balzer), and a second where they are bright red (Pringle). In both forms the eruptive elements consist of small tumours the size of a pin-head or larger, due to a hyperplasia of the sebaceous glands. The lesions are generally very numerous, and are distributed along the naso-labial furrow, over the chin, about the nose, and sometimes elsewhere. The Balzer type is definitely a congenital malady, appearing early in life and progressing until the age of puberty, when the condition tends to become stationary and permanent. A certain number of the patients so afflicted have been mentally defective, and others may show congenital abnormalities such as moles, patches of pigment, and the like. The Pringle type, the writer believes, may first appear later in life, and is often controlled by local applications containing sulphur, as pointed out by Pringle in his original communication. The treatment of the Balzer type is unsatisfactory. The individual lesions may be destroyed gradually with the cautery, or by electrolysis.

Morbus Recklinghausen (Plate 85, Fig. 160)

In neuro-fibromatosis, molluscum fibrosum, or von Recklinghausen's disease, two different forms of cutaneous lesions are present—pigmentary patches and tumours. The intellect of the patient may be defective, but this is not an essential feature. The pigmentary patches (not shown in the figure) are either brown or fawn-coloured " liver spots," or freckle-like macules. The tumours are very characteristic; they are composed of a mucoid substance resembling embryonic tissue, with numerous fusiform and mast cells, and a fibrous stroma. The earlier appear on the surface as sooty patches, which, on palpation, are recognised to be deeply placed nodular bodies. In their fully developed form they protrude as sessile or pedunculated nodules, varying in size from a pea to an orange; many of them can be pushed back into the hypoderm. The covering skin is either normal or of a brown tint. The name dermatolysis is given to a rare hypertrophic variety where masses of tissue hang down in pendulous folds.

True neuro-fibromata may also occur in the form of nodular masses along the course of one of the peripheral nerves; this association, although frequently referred to, is unusual.

Beginning in infancy or adolescence, the disease persists and progresses during the whole period of life; the lesions are scattered irregularly over the body, especially on the trunk, and may be present in

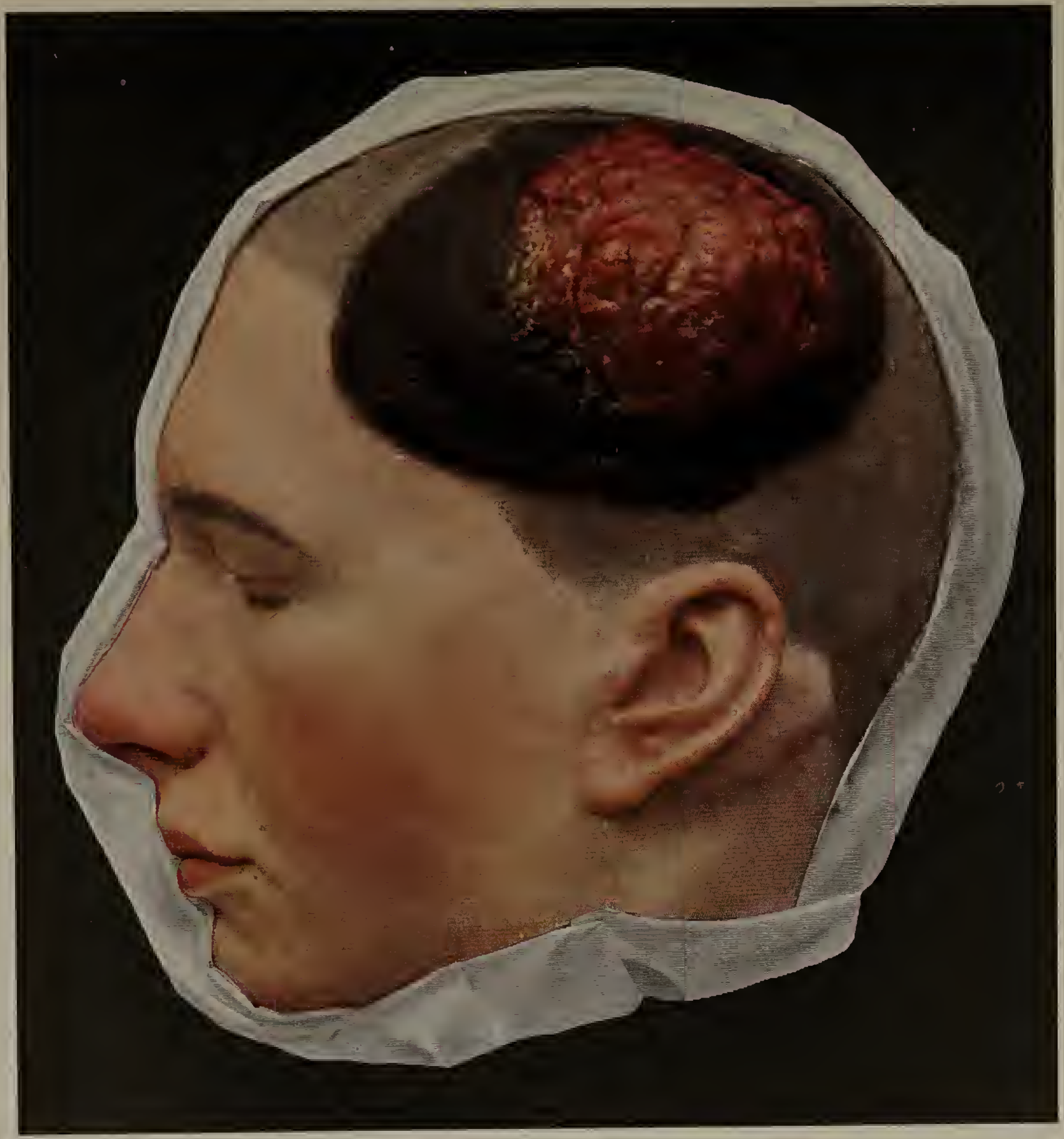

Fig. 159. Naevus pigmentosus; Sarcoma

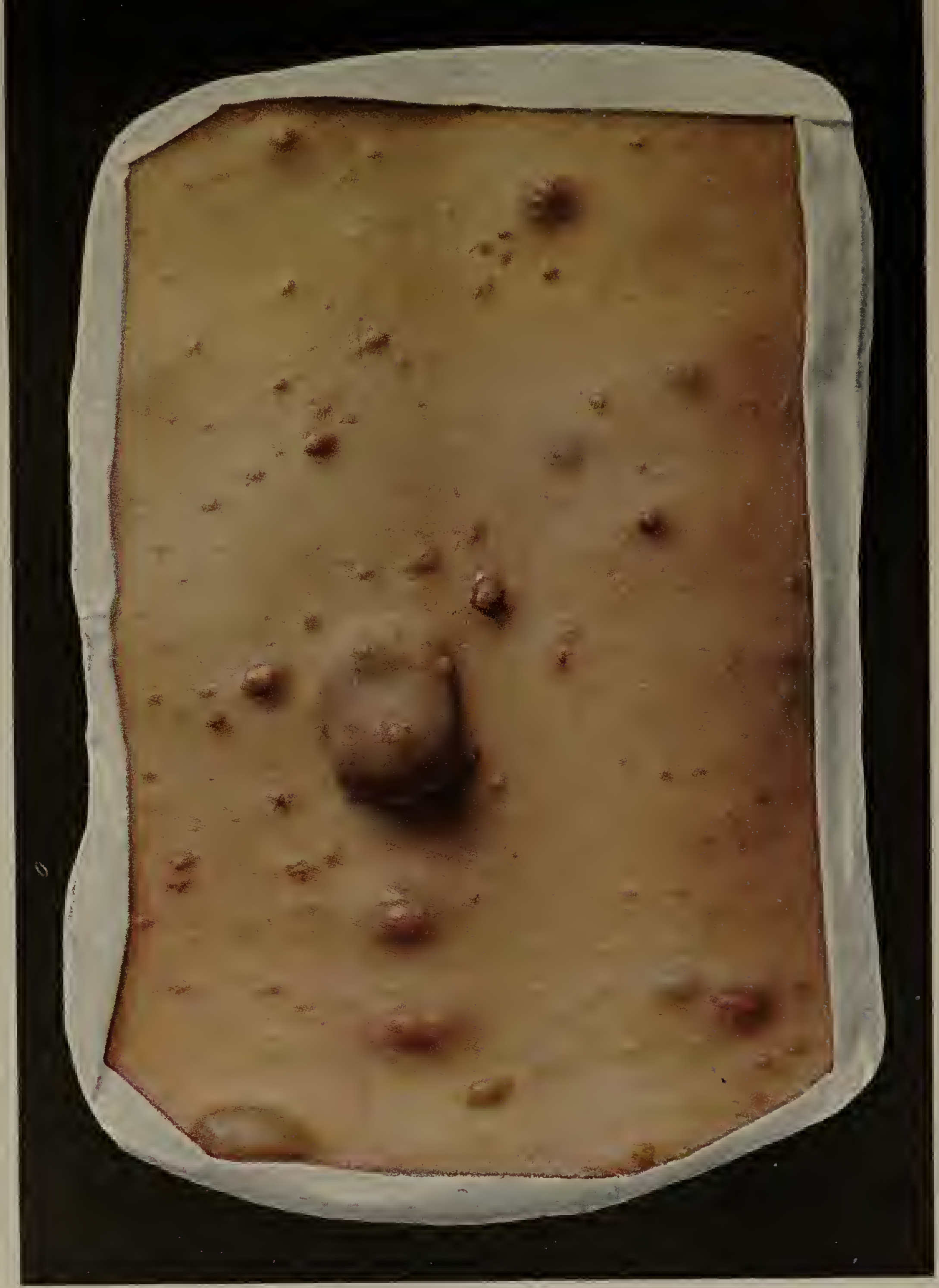

Fig. 160. Morbus Recklinghausen

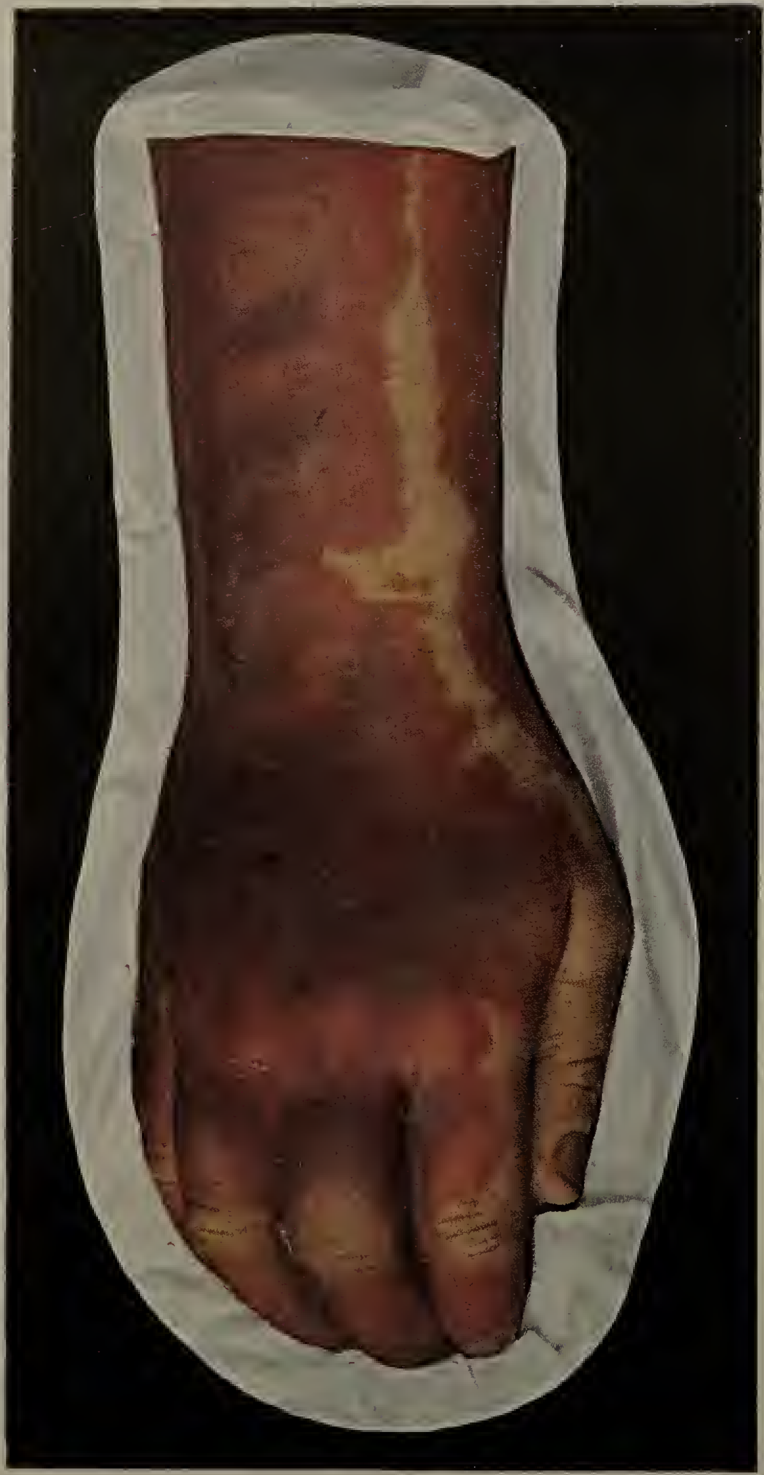

Fig. 161. Naevus vascularis

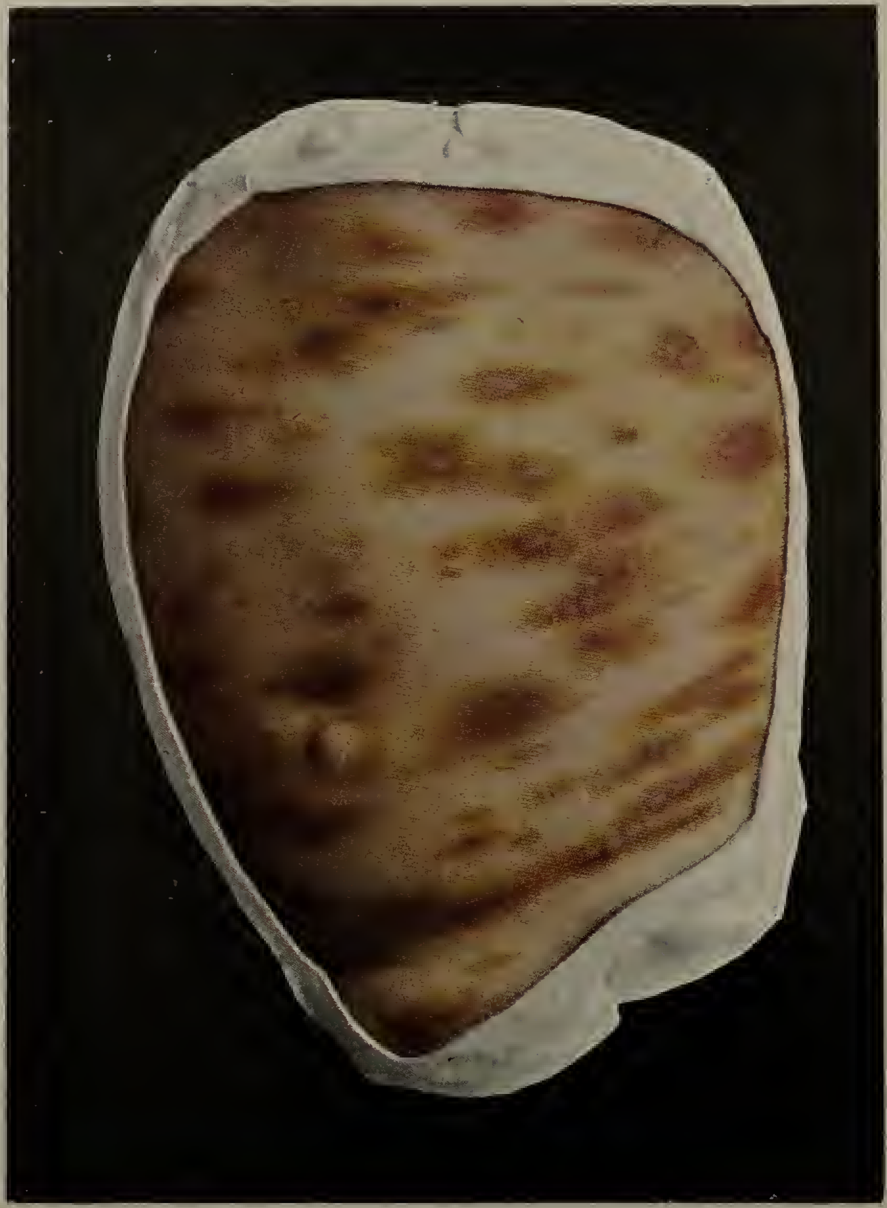

Fig. 162. Urticaria pigmentosa

large numbers. The lesser forms of the disease, where only a few elements are found, present some difficulty in diagnosis.

Treatment has no influence on the general course of the disease. Individual tumours can be excised if inconveniently situated, if exceptionally large, or if liable to irritation and secondary infection.

Nævus Vascularis (Plate 86, Fig. 161)

Under this head are included a number of congenital deformities due to dilatation and new formation of blood-vessels in the skin.

Capillary Nœvus (*Plane Vascular Nœvus*) (Fig. 161).—The capillary nævus is a common affection, and is found in a considerable proportion of individuals at the nape of the neck just within the hairy margin. Besides this type, which often passes unobserved, obvious and disfiguring forms of the disease occur on the face, upper portion of the body, and hands and arms (Fig. 161). The patch may be insignificant, or very extensive, covering half the face or involving large areas of the skin elsewhere. The colour varies from a light pink to a dark red (port-wine stain), and the depth of the process is also variable, since in some cases the redness disappears entirely on pressure. The covering skin is normal in texture, or may be raised here and there in tiny erectile tumours. Appearing at or shortly after birth, the lesion or lesions—for they may be multiple—tend to increase with the growth of the child, and to remain as a permanent deformity. A microscopic section shows a new formation of capillaries crowding the papillary and sub-papillary layers, or extending more deeply.

Treatment.—The results of treatment are generally unsatisfactory. When the condition is of the more superficial type, it may be possible to influence it by radium, but there is always the risk of a subsequent chronic radium dermatitis. Carbon dioxide snow is, in the writer's experience, entirely ineffectual.

Cavernous Angioma.—This variety differs from the above in the raised character of the individual elements. The bright red lesions are often multiple, and vary from the size of a button to large plaques. They may be met with on any part of the body, and are sometimes found on a mucous membrane. Not infrequently an admixture of fibrous or fatty tissue gives a more solid character to the tumour.

Treatment.—The common button-sized cavernous nævus is easily removed by refrigeration with CO_2 snow, beginning with an exposure of ten seconds, increased if necessary at subsequent sittings. Excision may also be practised in the limited forms of the disease, and is especially applicable to the mixed fibrous varieties, when freezing is only partially successful. In extensive nævi electrolysis can be employed, but this method of treatment requires considerable technical skill; it is often more satisfactory to attack the affected region piecemeal with CO_2 snow. The tendency of the lesions to disappear spontaneously should be considered before any drastic form of treatment is decided upon.

Nœvus Araneus.—The stellate, or spider, nævus is made up of one or more central vessels, from which fine branches spread outwards for a short distance on the skin. Children are sometimes affected, but the condition is not definitely of congenital origin and may appear suddenly in adult life. Spider nævi have also been observed in those suffering from Graves' disease. The lesions may be multiple, and are sometimes very numerous. In the adult they occasionally disappear spontaneously.

Treatment.—Excellent results are obtained by electrolysis, the point of a needle attached to the negative pole being inserted into the central vessel. A short exposure (four or five seconds) with a weak current (1 to 2 milliamperes) is sufficient. Where electrolysis fails, or is considered unsuitable, a fine-pointed stick of CO_2 snow may be used.

Urticaria Pigmentosa (Plate 68, Fig. 162)

This very rare disease begins in infancy and tends to persist for a number of years, when as a rule it dies out spontaneously. A few cases have been observed where the eruption has continued indefinitely, and a form of the disease originating in adult life is also known. Urticaria pigmentosa, despite the name, is not a true form of urticaria, but appears rather to be related to the nævi. The histological structure is peculiar and special; the affected part of the skin is crowded with mast cells, and this feature, together with certain changes in the general blood picture, has led to another view that the eruption is a cutaneous manifestation of some abnormal type of blood disorder.

The lesions appear either in the form of multiple, widely distributed, pigmented, urticarial papules, or as brown macules, which become swollen and turgid if friction is applied with, for example, a pointed stick over the whole affected area or to the individual lesions. Apart from the slight disfigurement it occasions, the eruption is of no importance. No form of treatment is known to influence the course of the disease.

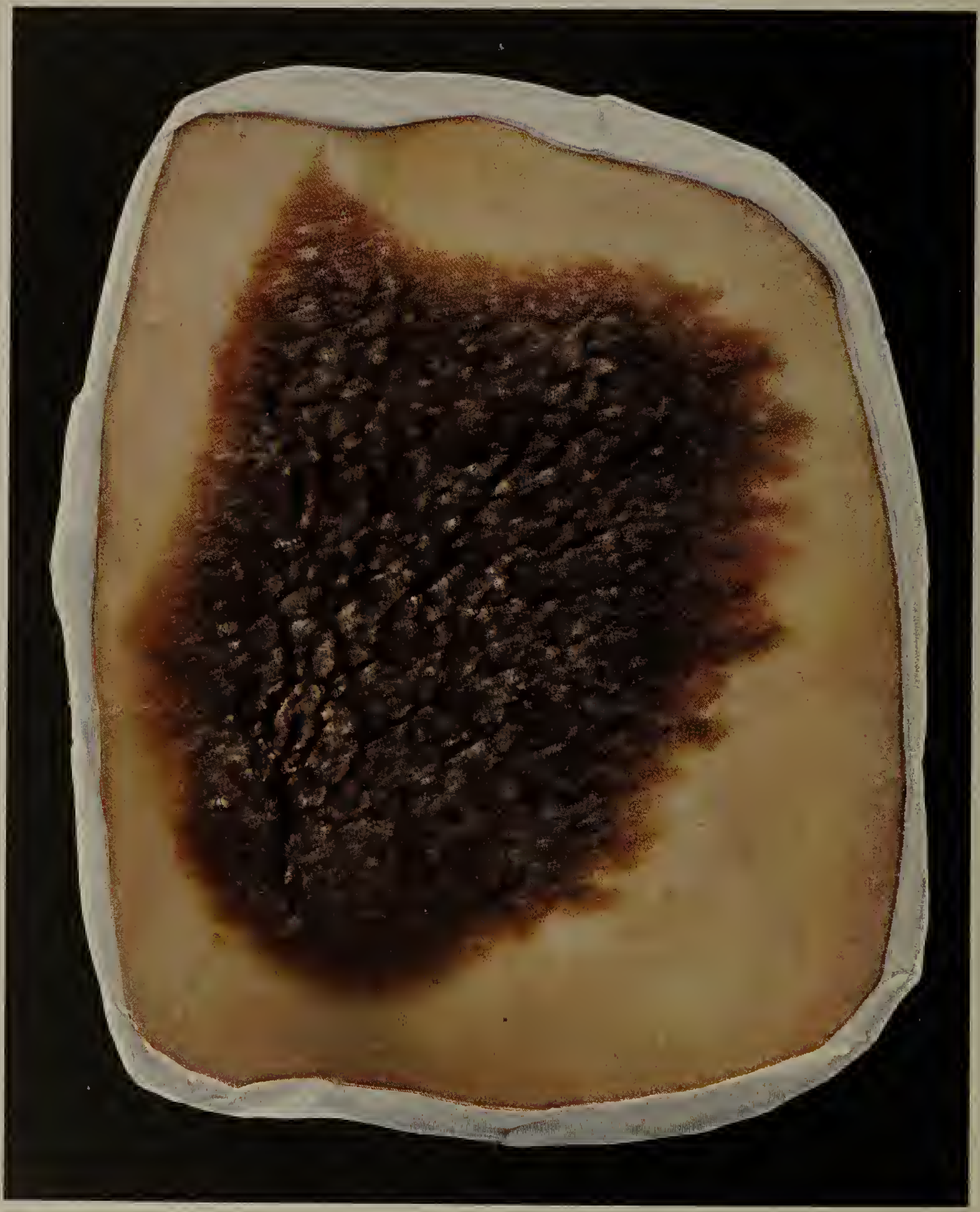

Fig. 163. Naevus papillaris pigmentosus

Nævus Pigmentosus (Plates 85, 87, and 88, Figs. 159, 163, and 165)

Pigmentary nævi are congenital malformations of the skin, appearing either as flat stains, raised soft moles, or hard warty masses in bands (nævus linearis) or patches (nævus verrucosus).

Flat Pigmentary Nævi are very commonly seen on the trunk, face, and elsewhere, either as small, freckle-like spots or as brown or yellow stains, oval or irregular in outline. In the second group the patches sometimes exhibit an excessive growth of hair. Apart from their appearance, they are only important in their relationship to melanotic cancer.

Where it is considered necessary they may be treated either by CO_2 snow applied in the usual manner; or by removing the coarse hairs, if present, by electrolysis, when the patch usually fades or disappears. In middle-aged individuals the possibility of melanotic carcinoma should be kept in mind, especially in the deeply pigmented lesions, before any method of treatment liable to cause irritation is instituted.

Raised or Tuberous Moles occur on the neck, face, and other parts of the body as small, soft elevations, often exhibiting a number of coarse hairs on the surface. The colour may be brown or black, or approximately that of the normal skin. Soft moles are seen in infancy and childhood, but may only increase in size and become prominent and obvious after middle age.

Hairy moles involving large areas on the face and trunk are variants in which an exaggerated development of hair has occurred, and in which the lesions are unusually extensive (Fig. 159).

Pathology.—The microscopic characters of the tuberous, or soft, moles are peculiar and special, and have been the subject of very numerous investigations. The most striking feature is the infiltration of the dermis with round or cuboidal cells (nævus cells) with a large nucleus and abundant protoplasm. These cells are arranged in columns or nests, and they are believed to be of epiblastic origin and to have been originally snared off from the epidermis (Unna). It is from these cells that the very malignant pigmentary cancer is developed.

Treatment may be undertaken, when the lesions are disfiguring, by refrigeration with CO_2 snow, or by electrolysis, the needle attached to the negative pole being inserted in various directions through the growth. Depilation of the hairs by electrolysis is often followed by the disappearance of the mole. Moles showing any unusual activity should be promptly excised.

Nævus Verrucosus

This name is given to the hard forms of pigmentary nævi associated with hyperkeratosis. Two varieties are described:

Linear Nævus (Fig. 163), also called ichthyosis hystrix and nævus unius lateris, appears in the form of short lines or long bands, composed of numbers of small, pigmented, warty elevations covered with an adherent scale; occasionally the lesions are less markedly verrucose and of a pink instead of a brown colour. The condition is congenital, and occurs on the face, neck, or across the trunk or down a limb, and is usually unilateral (nævus unius lateris), but may, in exceptional circumstances, be bilateral and symmetrical.

Treatment consists in the destruction of the warty masses with the cautery, or in limited cases in excision of the whole mass.

Nævus Papillaris Pigmentosus Verrucosus (Fig. 163) is merely an example of the pigmentary mole in which diffuse hyperkeratosis occurs, giving rise to a more or less extensive hard warty area. The condition occurs in single or multiple patches, sometimes in a symmetrical arrangement.

Syringoma Multiplex (Plate 89, Fig. 166)

In syringoma, or hydradenoma, the eruption occurs either on the chest or about the eyes. On the chest the lesions are observed between the ages of ten and twenty (Darier) in the form of small, pink, slightly raised elements, not unlike a secondary syphilide (Fig. 166). About the eyes the condition is met with principally in women, and is of later development. In both forms the tumours are made up of cylindrical tubes and cystic dilatations, possibly arising from embryonic cell rests or from rudimentary sebaceous glands. The lesions in this rare disease tend to come out in crops and to persist indefinitely.

The destruction of the individual elements may be effected by the cautery or by electrolysis.

Melanoma Multiplex (Nævo-Carcinoma) (Plates 85 and 89, Figs. 159 and 167)

The names melanoma multiplex, nævo-carcinoma and melanotic carcinoma are applied to a highly malignant form of new growth originating in a pigmentary nævus.

The dissemination of the tumour is very rapid, the disease spreading to every organ of the body besides the skin and glands. Occasionally

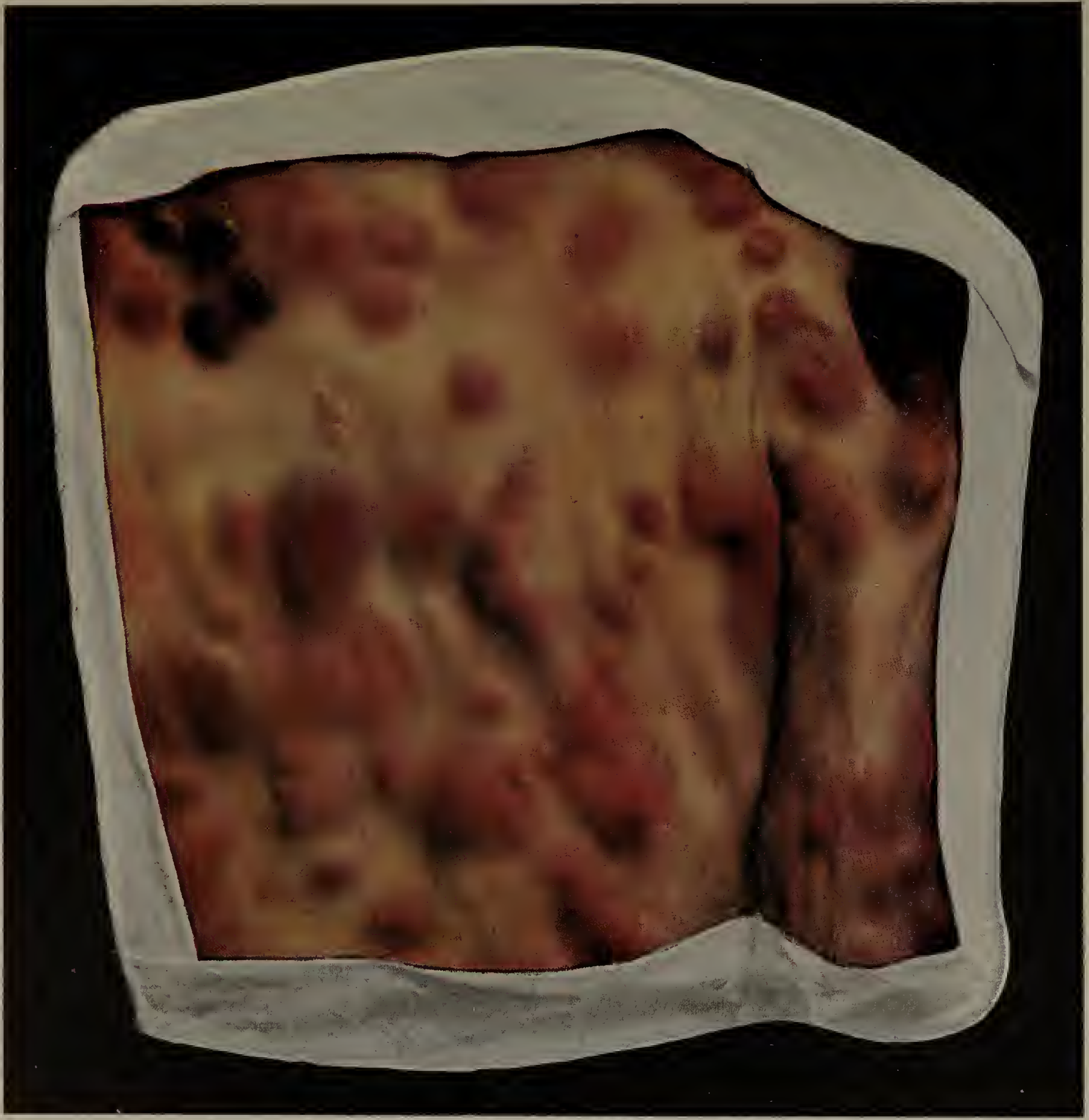

Fig. 164. Sarcomatosis cutis

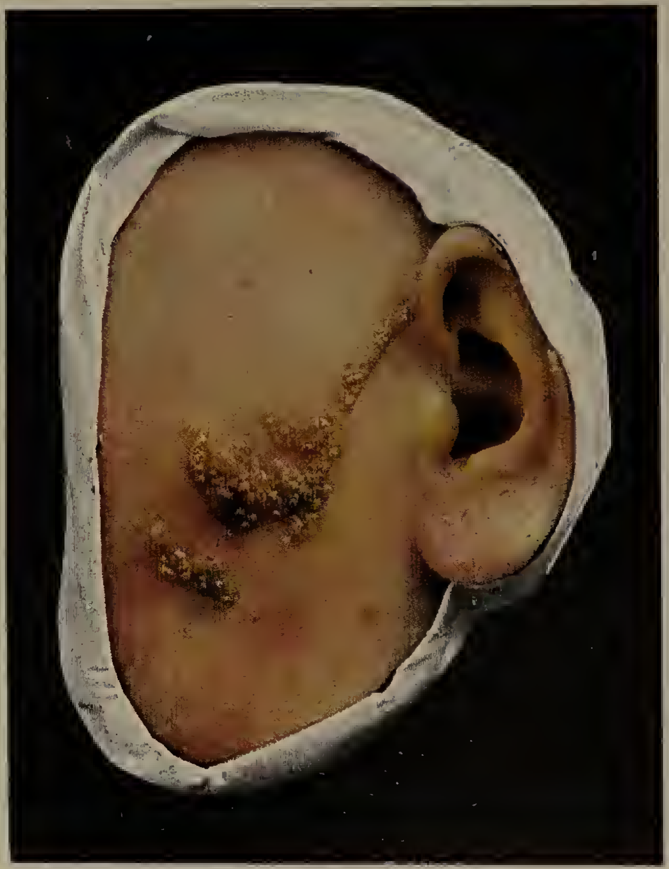

Fig. 165. Naevus linearis

Plate 89

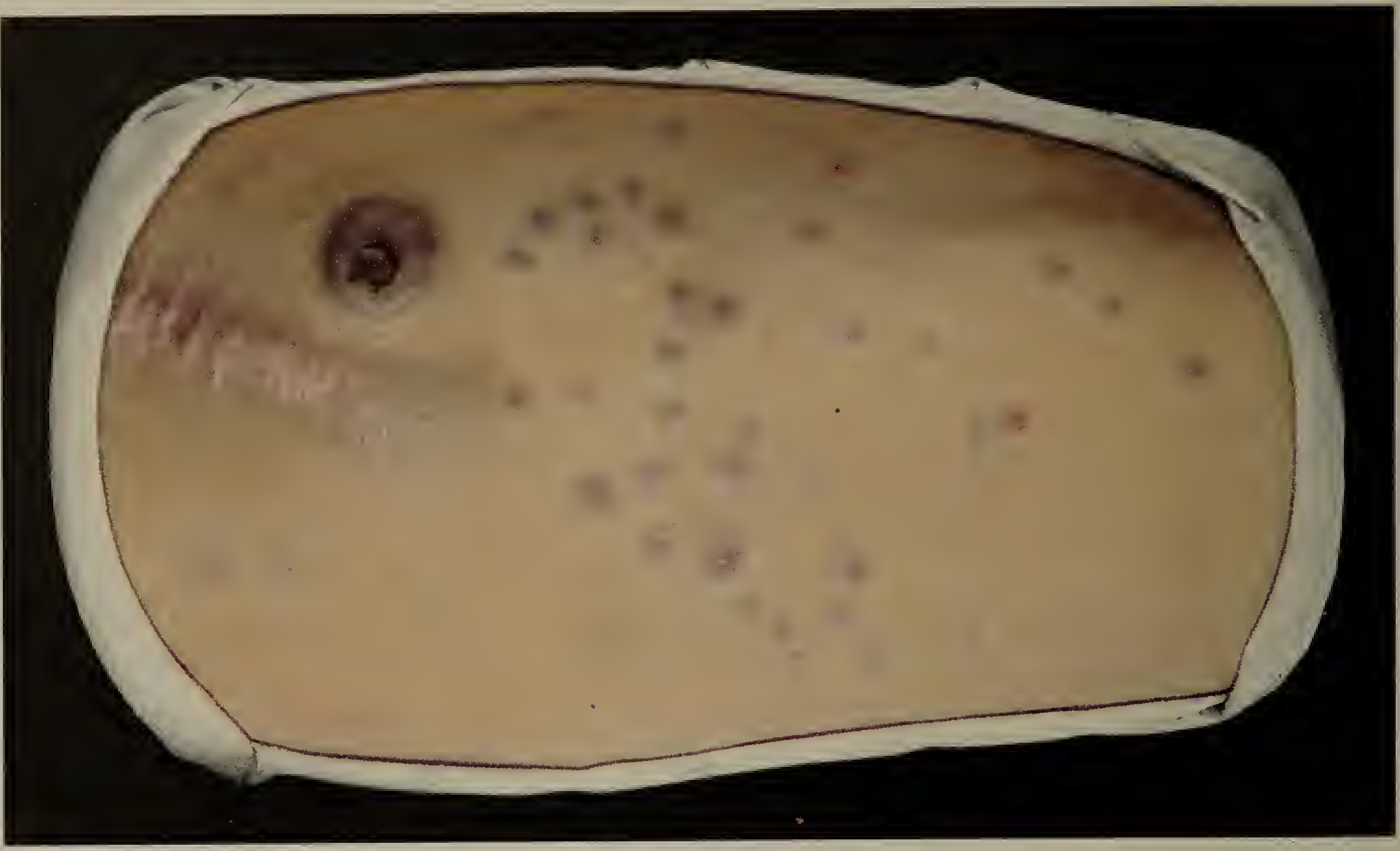

Fig. 167. Melanoma multiplex

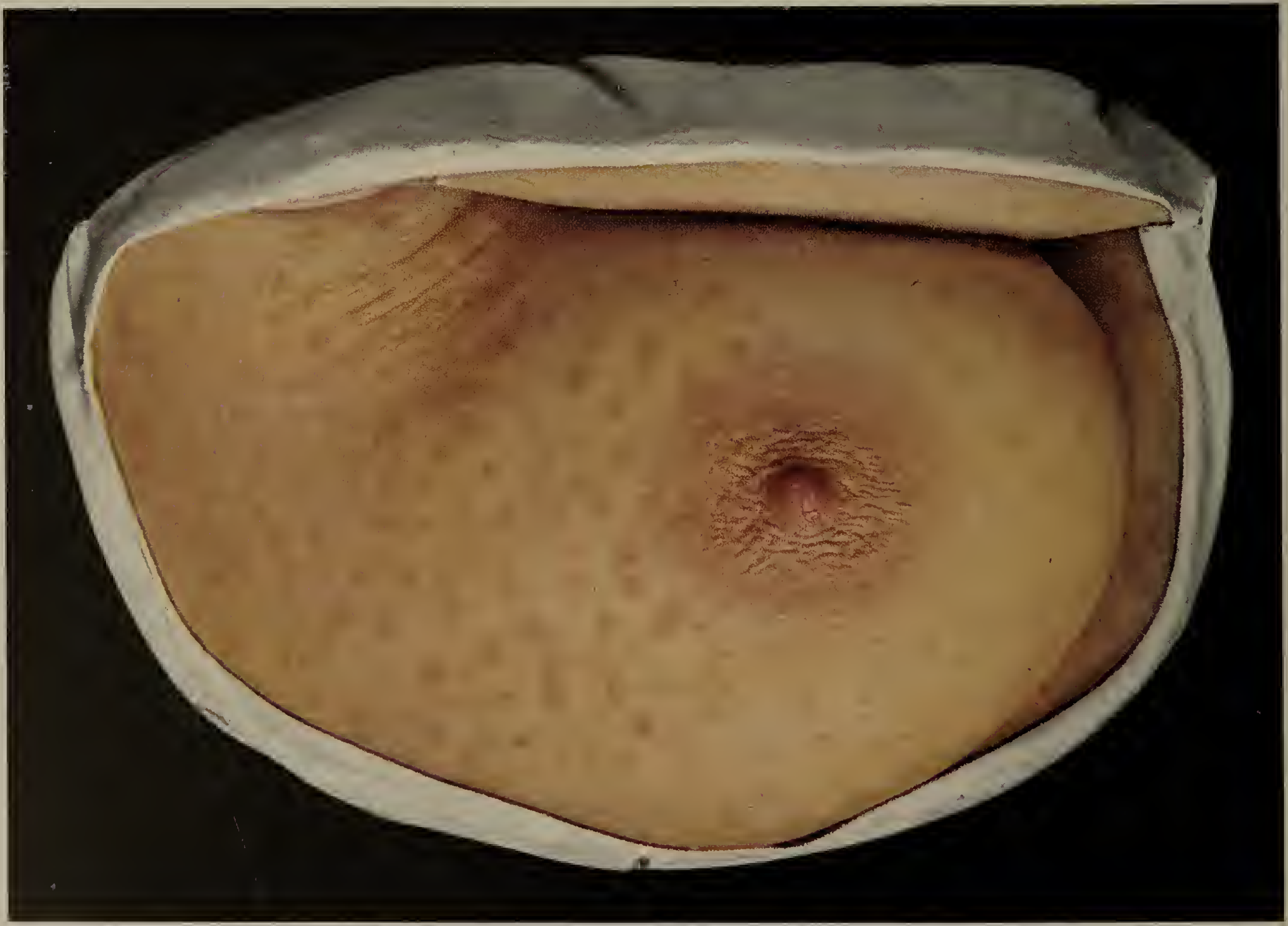

Fig. 166. Syringoma multiplex

the earliest stage is seen as a little ring of pigmented lesions about the primary growth.

The disease may be met with in the middle-aged and elderly, but also occurs in quite young subjects. It was formerly usual to classify this new growth among the sarcomata (melanotic sarcoma), the type of cells found in the new growth—spindle-shaped, globular, and irregular—seeming to support this view. It is now believed that these cells are identical with the " nævus cells " seen in pigmentary moles (see p. 109), and as these are of epidermal origin the term nævo-carcinoma is now generally used. The form taking origin in the uveal tract of the eye follows a different clinical course, and appears to be more closely connected with sarcoma, even if it is not actually sarcomatous.

The primary growth may be insignificant, or extensive and obvious (Fig. 159). Dissemination soon occurs, producing on the skin multiple, sooty, subcutaneous nodules (Fig. 167); pigmentation of the cutaneous deposits is, however, not invariable, some forms being non-pigmented. The significance of the primary growth may be overlooked, and the patient may not come under observation until metastases have developed; once this has happened, no treatment is of avail. It is therefore of the highest importance to deal immediately and radically with any potential source of trouble in the form of a mole which shows signs of activity, irritation or extension.

Sarcoma (Plate 88, Fig. 164)

Sarcoma of the skin may either be primary, or secondary to sarcoma of some other region of the body. In its primary form it is an exceptionally rare disease; some confusion has arisen by the inclusion within the group of such conditions as the idiopathic hæmorrhagic sarcoma of Kaposi (p. 118), and the nævo-carcinomata described above, neither of which is truly sarcomatous.

The histological structure of the growths corresponds to that seen in sarcomata elsewhere—round, spindle and mixed forms of cells being met with. The lesions appear as red or purple tumours of various dimensions, or they may be of the colour of normal skin. Two principal clinical types are distinguished—one where the tumour is generally single and only locally malignant, recurring in the scar after surgical removal, and a second form where the primary growth is followed by multiple cutaneous lesions, which may be very numerous (sarcomatosis, Fig. 164). This latter type may originate on any part of the body, and is generally composed of round cells.

Treatment is surgical, but it is claimed that arsenic given in large doses by the mouth or by hypodermic injection may in some cases bring about a favourable result.

Carcinoma

Carcinoma of the skin may be either primary or secondary. The secondary forms are usually associated with cancer of the breast, and invade the skin by direct extension or appear as multiple subcutaneous nodules from lymphatic permeations (Handley). Metastases may also arise from internal cancer, the histological structure of the primary growth being reproduced in them. Dermatologists are acquainted with a number of conditions which are termed pre-cancerous because of their special liability to undergo malignant degeneration. Such are chronic X-ray and radium dermatitis, senile keratosis, Bowen's disease and the conditions found on the skin of those working in tar and soot.

It is customary to divide the primary cancers of the skin into two groups in accordance with their clinical and histological features—viz., rodent ulcer or basal-cell cancer, and squamous epithelioma or prickle-cell cancer.

Pathology

A study of the histology of *rodent ulcer* shows that three forms of growth are met with. In a paper published in 1910, the writer suggested the following classification: pure rodent ulcer, mixed rodent ulcer, and an indeterminate type. Pure rodent ulcer represents the classical form described in all textbooks. The microscopic appearances are characteristic, and show lobulated down-growths of small cells similar in appearance to those of the basal layer of the epidermis. Occasionally ill-developed cell nests are found; intercellular fibrillæ are not observed, and in only one case has the writer been able to detect true fibrillæ by the Unna-Kromayer method. In mixed rodent ulcer in one part of the section the neoplasm is of the "basal-cell," and in another of the "prickle-cell" type, and sometimes a fusion or transition between the two forms can be made out. This type of growth is not uncommon, although it is not very well known, and is of special importance because of its resistance to radium and X-rays. Intermediate forms include a few rare growths where great difficulty is experienced in deciding whether the cells belong to the " basal " or " prickle " cell variety.

In Squamous Epithelioma the cells are larger and more active, and exhibit intercellular fibrillæ. The growths are thus composed of cells resembling the prickle layer of the epidermis. Lobulated masses and detached

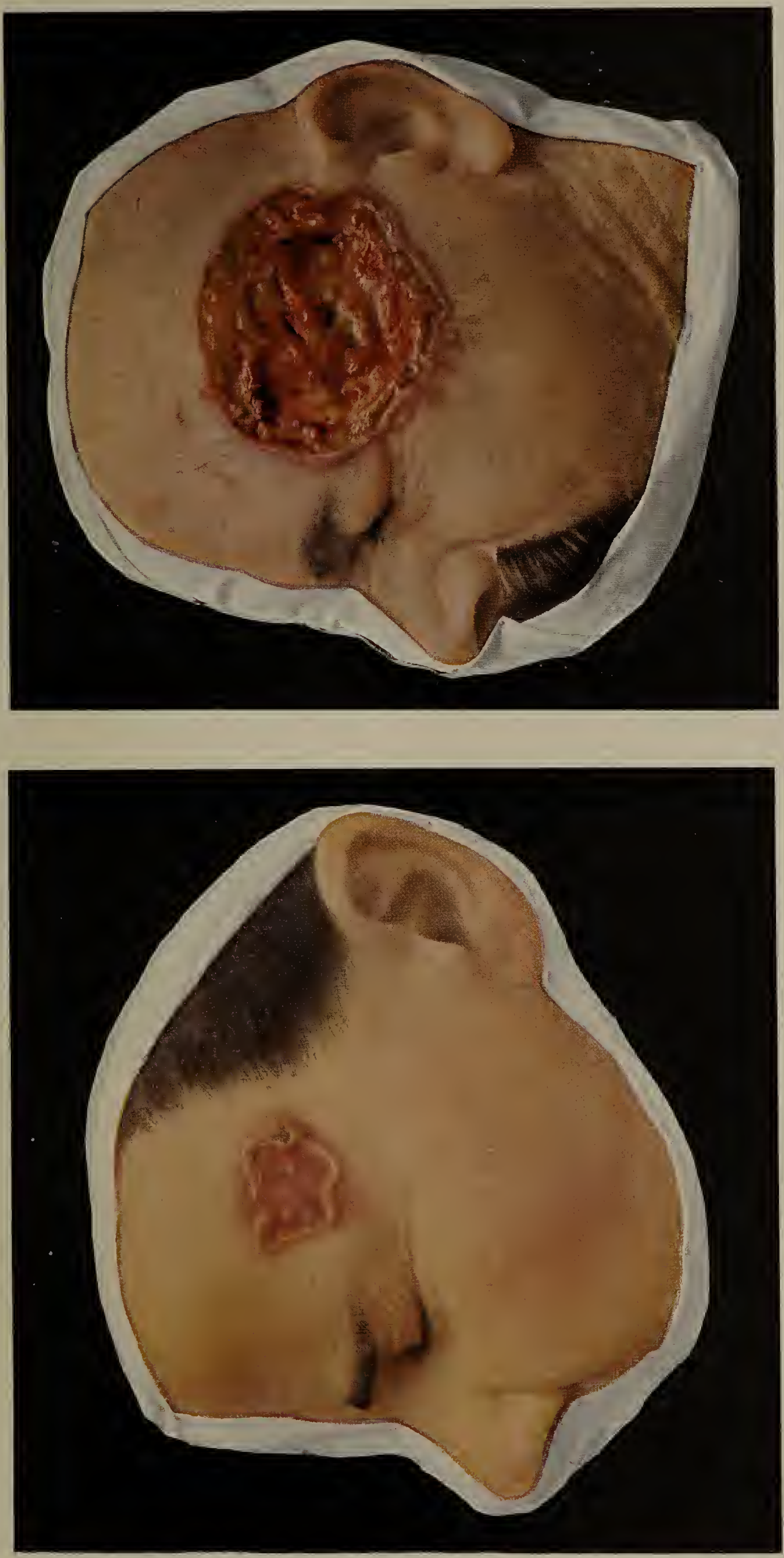

Fig. 168 and 169. Ulcus rodens

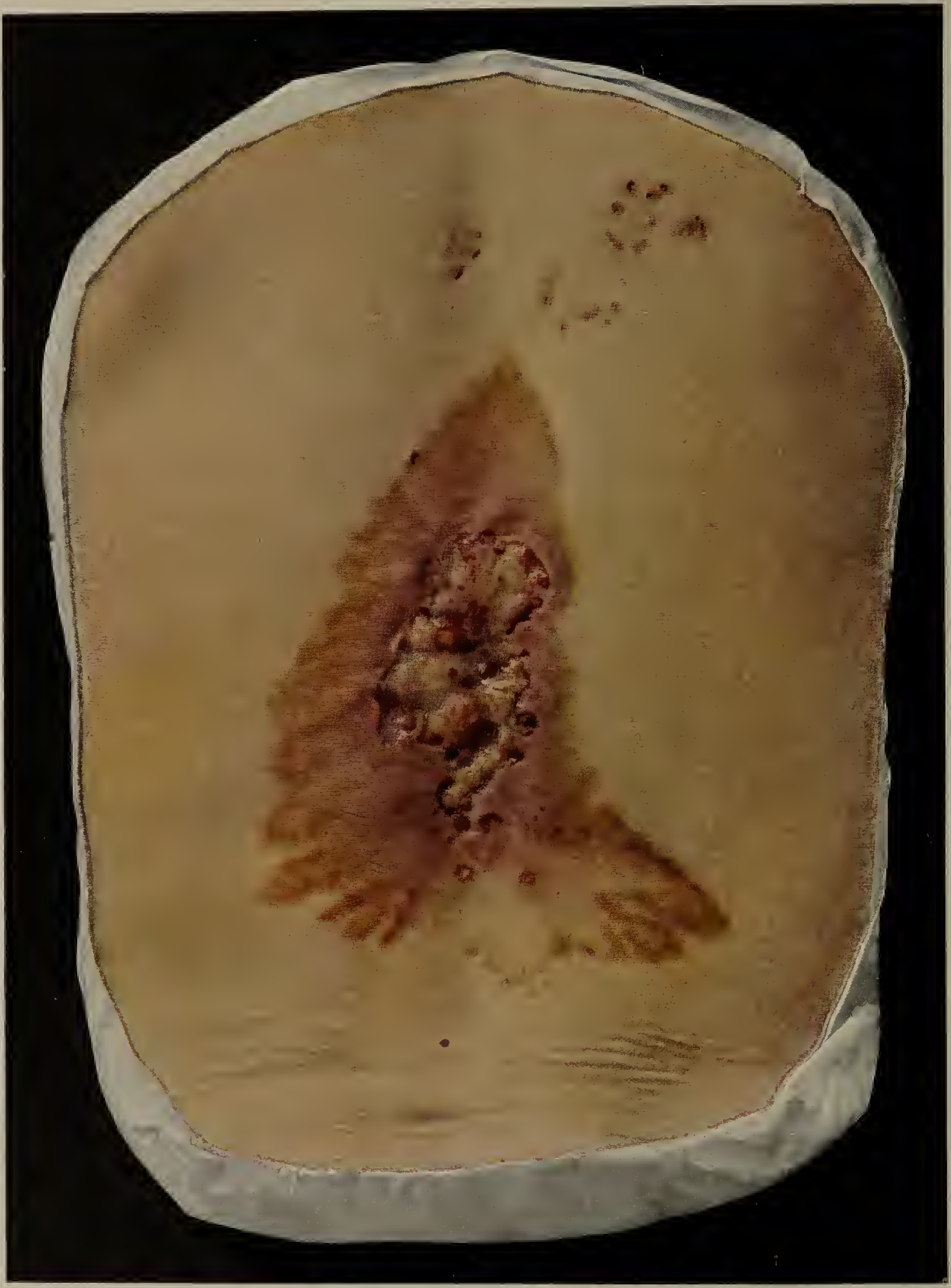

Fig. 170. Carcinoma basocellulare multiplex

groups invade the dermis, and cell nests are usually well developed. On both the skin and mucous membranes the microscopic structure of the growth is similar.

Rodent Ulcer (Plates 90 and 91, Figs. 168, 169, and 170)

Rodent ulcer is relatively common, and is seen in a variety of different clinical forms. Like cancer in general, it usually appears after middle life, but to this rule there are exceptions, the disease in its classical form being sometimes met with in quite young subjects. While the skin on any part of the body may be affected, a decided preference is shown for the upper two-thirds of the face, especially the neighbourhood of the inner canthus of the eye. In its early form the tumour is seen as a small, hard, pearly nodule, the size of a pin-head or a split-pea. This gradually extends, the centre becoming either ulcerated or cicatrised, the typical hard, raised, pearly margin being preserved in both cases (Figs. 168 and 169).

The general form of the lesion may be round, irregular, or polycyclic. In the more extensive ulcerated types the early crust disappears, and a raw surface is exposed (Fig. 169). In other cases, fortunately rare, the destructive process is unusually violent and rapid, the tissues being eaten away extensively (terebrant rodent ulcer). Cystic changes may develop in the growth, which is then raised and softer, showing semi-translucent points representing the underlying cysts. A cardlike variety is also described where an ivory white patch, resembling morphœa, is let into the skin. This rare form usually occurs on the skin of the nose about the nostrils. The superficial erythematous rodent ulcer is not so well known, and is frequently mistaken for other conditions (Fig. 170). In this form the general surface is red or brown, and often covered with tiny crusts or scales. The lesion is remarkably superficial, and tends to progress very slowly, and has often assumed considerable dimensions before the patient comes under observation. The outline is irregular or oval, and is bounded by a fine, raised, hard border. Sometimes the centre ulcerates, or little nodules may appear on the surface. Multiple growths may be met with in any form of the disease, and are especially common in the last-named variety.

Diagnosis

The characters and situation of the lesion and its slow progress are so striking that, as a rule, no difficulty is experienced in making a diagnosis. The late or tertiary syphilides on the face bear a certain resemblance to rodent ulcer, but are distinguished by the history, by their more rapid progress and by other signs of syphilis, such as buccal leucoplakia and a positive Wassermann reaction. In any case of doubt a microscopic section of a tiny portion of the growth should be made.

Treatment

The best results are obtained in the early stages of the disease, by radium, X-rays or excision. Treatment by radium is carried out with an unscreened applicator containing 5 mgs. radium element per square centimetre, the exposure lasting about one and a half hours.

Alternatively X-rays may be given in full doses at intervals of three weeks, or by Adamson's method, where the tumour is first curetted with a sharp spoon and the raw surface then irradiated with heavy doses. In both cases, and also where radium is used, the surrounding normal skin must be carefully protected. Excision is followed by satisfactory results, and is especially indicated where the lesion has invaded cartilage or a mucous membrane.

Squamous Epithelioma (Plate 93, Figs. 172 to 174)

Squamous or prickle-cell epithelioma may arise on apparently normal skin, but is not uncommonly observed to occur upon chronic ulcers, scars, and patches of lupus, or to develop on one of the precancerous dermatoses such as chronic X-ray dermatitis or senile keratosis. The disease follows a more rapid course than rodent ulcer, and is liable to involve the lymphatic glands. Epithelioma of the skin has a similar microscopic structure to cancer affecting mucous membranes, and the two conditions are for this reason often considered together. If the epitheliomata of the skin be separately studied, it will be found that they are much less malignant than is usually supposed. Thus, out of a series of twenty-two cases, enlargement of the lymphatic glands, implying metastasis, was noted in only six cases, in three of which microscopic examination was made. All were free from malignant deposit, one being tuberculous. Four of these twenty-two cases arose on patches of lupus vulgaris. Whether the lesion arises on the normal skin, on a patch of lupus or on a scar, it assumes either the form of a single warty nodule or a papillomatous growth. The distinguishing features are the hardness and progressive character of new formation. The surface may ulcerate, the edges still retaining their indurated character. These growths may arise in the neighbourhood of a mucous membrane—the lip, for instance—and, invading it, assume the virulent characters of a

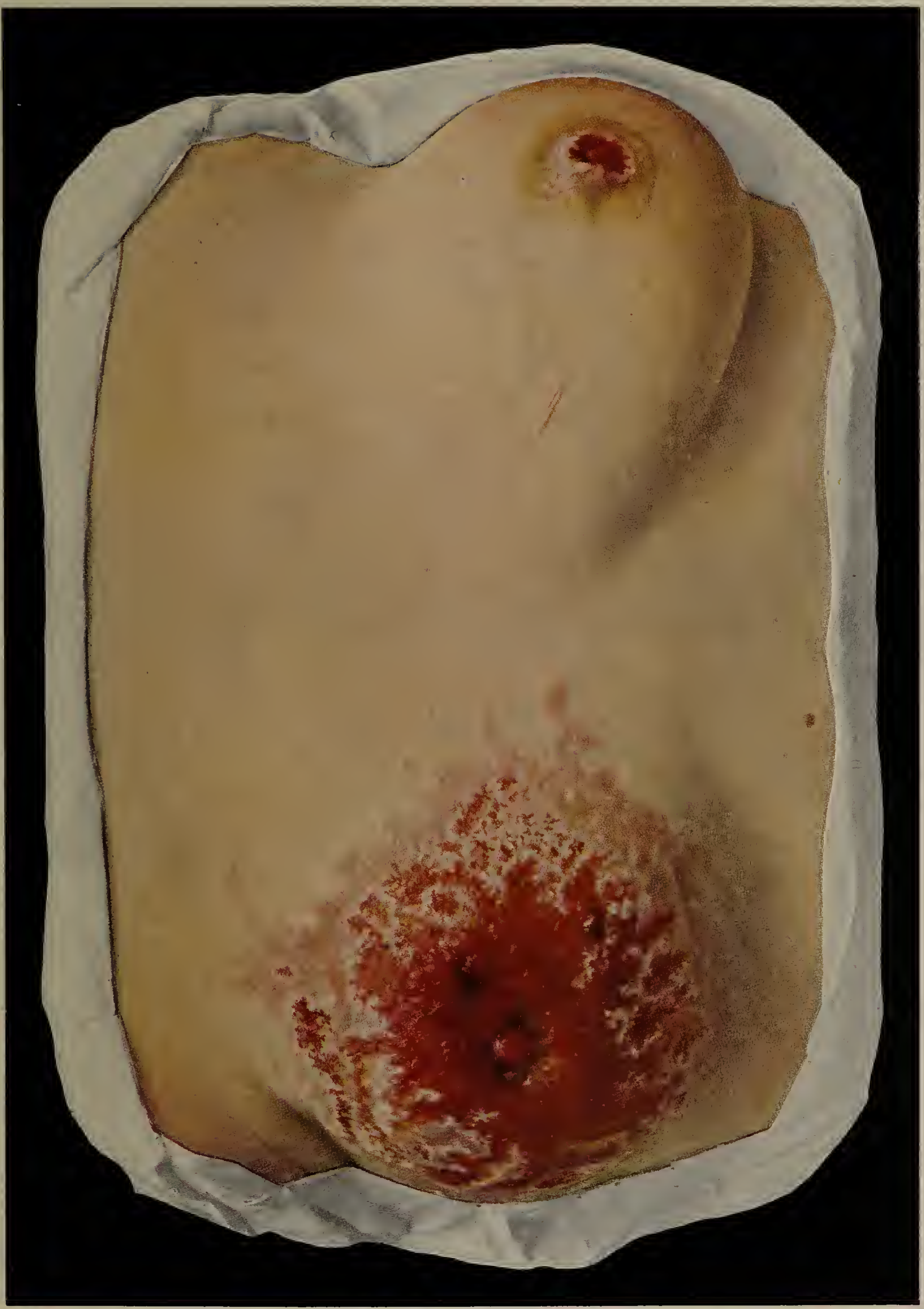

Fig. 171. Morbus Paget

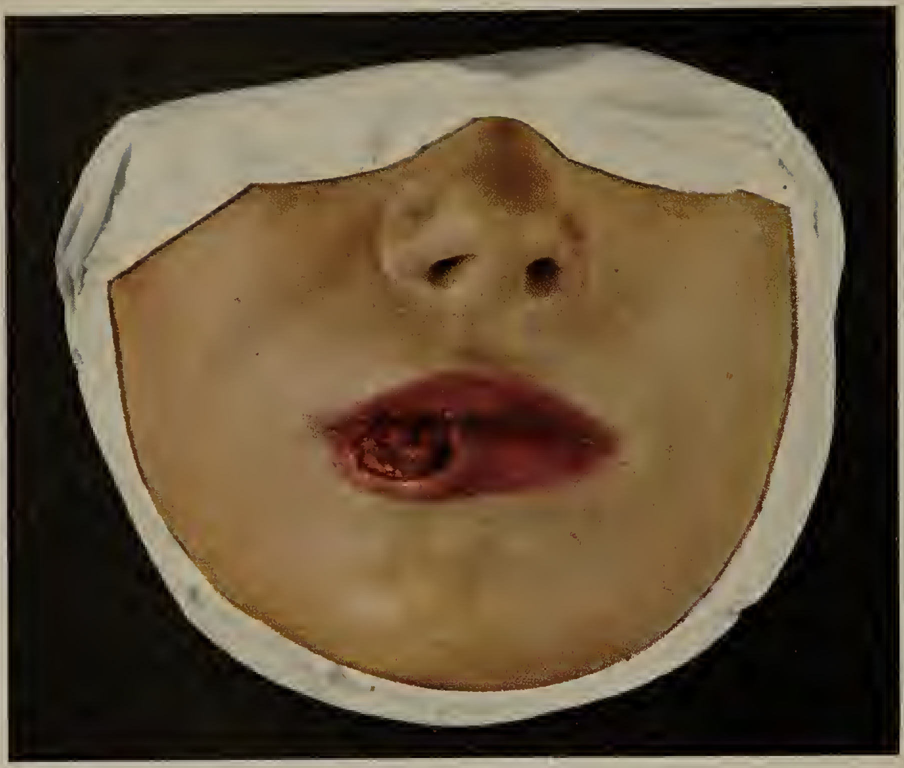

Fig. 172. Carcinoma labii inferioris

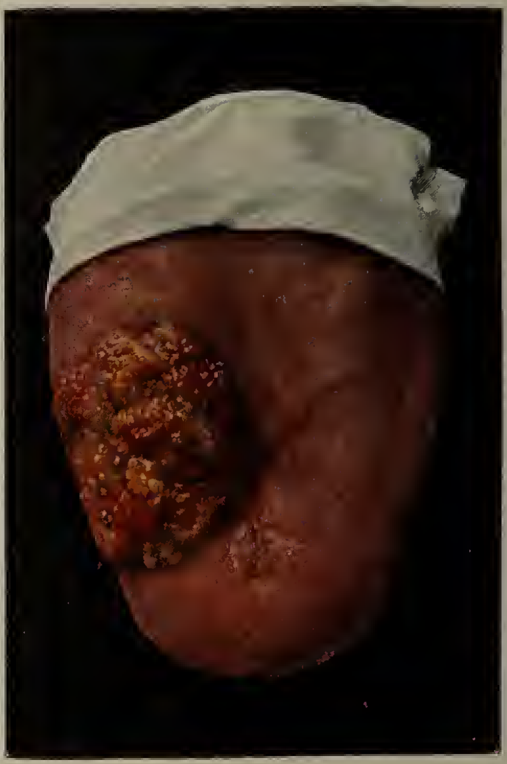

Fig. 173. Carcinoma linguae

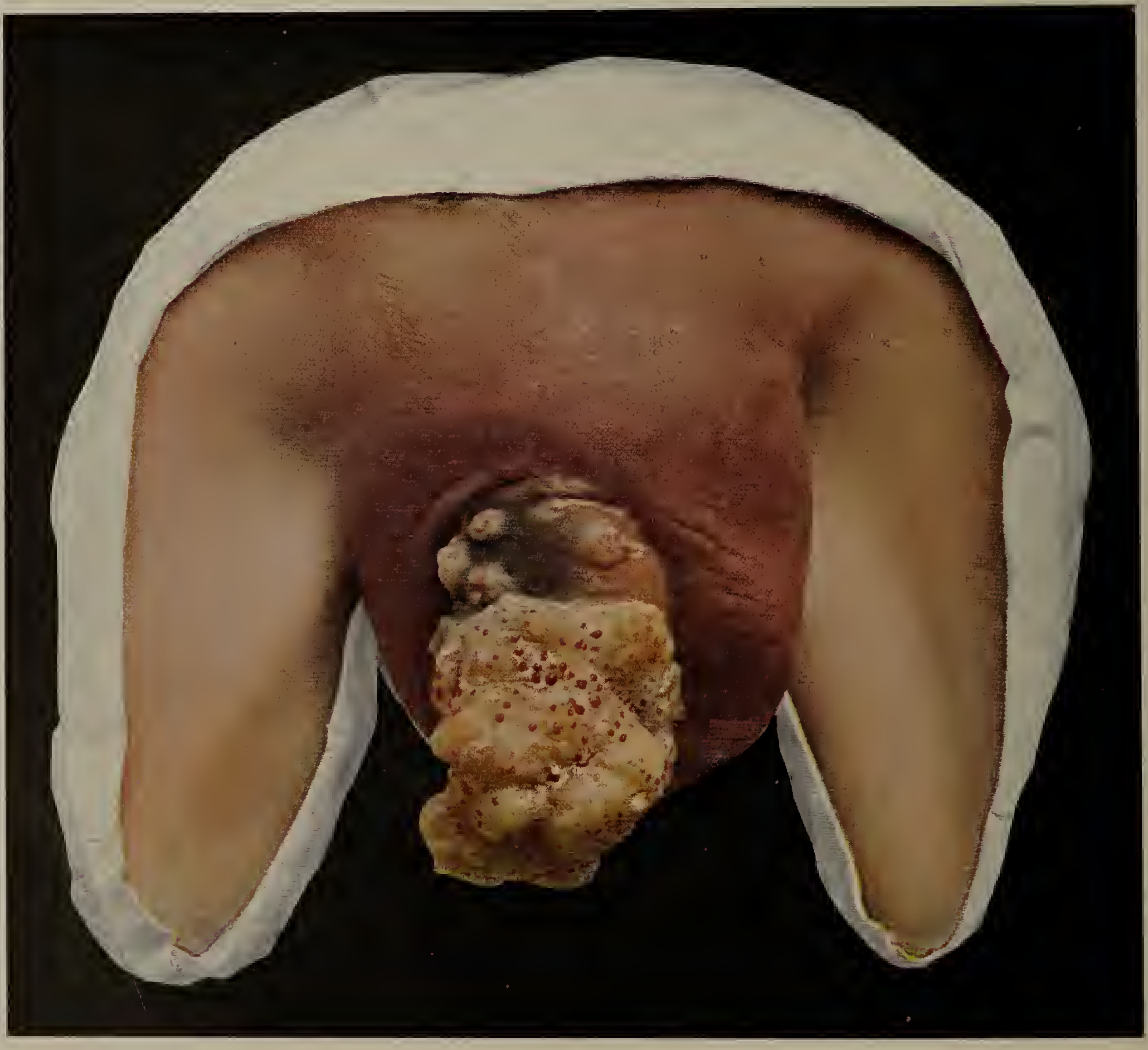

Fig. 174. Carcinoma penis

mucous membrane epithelioma. The greatest difficulty will often be experienced in determining whether a warty growth is simple or malignant, especially where such a lesion occurs on a scar or on a definitely pre-cancerous area. In all such cases a small portion of the growth should be removed for microscopic examination.

Treatment

The treatment of this condition is purely surgical. Radium and X-rays are ineffectual, and when used, only delay treatment and allow the further progress of the disease. The prognosis is not necessarily bad, for many of the growths do not invade glands, or only do so at a late stage. In all cases, nevertheless, any suspicious lymphatic gland should be removed and subjected to confirmatory microscopic examination. The degree of malignancy is much higher in the epitheliomata caused by X-ray dermatitis, and growths on the scrotum appear to form metastases more frequently than those in other situations.

On the *mucous membranes* (Figs. 172, 173, and 174), the cancerous process occurs in several distinct forms, generally as a raised, red nodule with a flat or ulcerated surface, or as a papillomatous excrescence. Hard, button-like tumours may occur on the lip or penis, and in the latter situation may gradually eat away the tissues, producing a fungating, cauliflower-like mass (Fig. 174). In contrast to the histologically similar cutaneous growths, the malignancy is high, as the lymphatic glands are rapidly involved. These forms of cancer are purely surgical, and need not be specially referred to here.

Cancer of the tongue comes under the observation of the dermatologist because of its relationship to syphilis. Syphilitic leucoplakia of the tongue is relatively common in old-standing forms of the disease, and as it appears to be brought about by the chronic irritation of tobacco smoke it is, even now, almost entirely confined to the male sex. Upon the white patches cancer not infrequently develops, and thus syphilitic leucoplakia is a true pre-cancerous condition. C. Morson and the writer investigated a series of cases of cancer of the tongue from this point of view, and found evidence of syphilitic infection in 26 per cent. Three cases of fulminating cancer of the tongue arising in deep gummatous infiltration have come under the writer's observation, but such a condition is extremely rare.

Morbus Paget (Plate 92, Fig. 171)

Paget's disease is a true cancer of the female breast, with superficial manifestations in the form of a chronic eczematoid eruption.

Etiology and Pathology

This rare disease occurs in females over the age of forty years, and is limited to one breast. Similar conditions may be met with in both sexes on the umbilicus and pubic region. The histopathology has been investigated by a number of different observers, and is very characteristic. The epidermis is hypertrophied, growing downwards in elongated masses. Many of the Malpighian cells lose their intercellular filaments and become pale and swollen, while here and there curious intracellular " round bodies," at one time mistaken for coccidia, are observed. There is a dense cellular infiltration of the dermis, largely composed of plasma cells. The actual malignant process begins in the lactiferous ducts, not in the skin, extends through the mammary gland and forms metastases in the lymphatic glands and the viscera.

Symptoms

The condition begins as a small, red, eczematous patch about the nipple, crusted and moistened with a sticky exudate. After a time the eruption becomes more extensive and more marked, spreading outwards to form a bright red raw area, over which are scattered dirty white islets. The secretion dries up into crusts, and there is distinct induration, the lesion feeling " like a penny under a cloth." The progress of the disease is slow, but in due course, perhaps not before several years, the nipple becomes retracted and a definite lump is felt in the breast itself. Subsequently the glands are affected, and the metastases may occur in the liver, spleen, and elsewhere.

Diagnosis

The disease has to be distinguished from eczema and scabies. Eczema of the nipple region is almost entirely confined to nursing mothers, is bilateral, and clears up with comparative ease. In scabies the eruption is also symmetrical, and is accompanied by other signs of scabies between the fingers, on the fronts of the wrists and over the abdomen.

Treatment

In view of the malignancy of the condition and its subsequent course if neglected, the breast with any affected glands should be removed surgically.

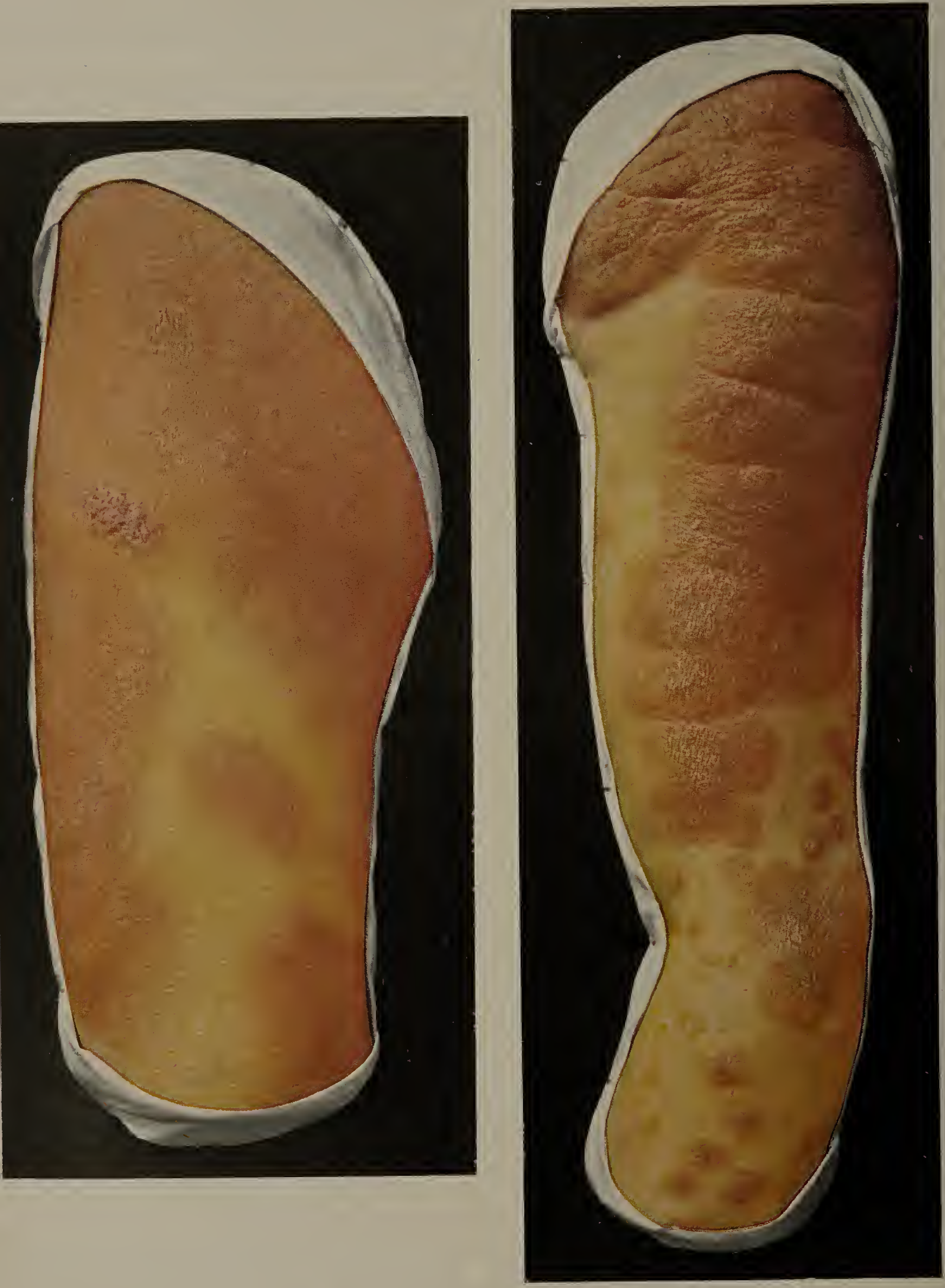

Fig. 175 and 176. Mycosis fungoides

Mycosis Fungoides (Plates 94, 95, and 96, Figs. 175 to 178)

A chronic, and eventually fatal, disease of the skin in which two stages are recognised: a first, or pre-mycotic, where itchy eruptions of different kinds occur in patches or areas; and a second, or tumour stage, where soft, red growths develop on the skin.

Etiology and Pathology

This disease is generally observed between the ages of thirty and fifty years; in a series of seventy-four cases collected by Sequeira, forty-six were males and twenty-eight females. The views that it is an infective granuloma, that it is an abnormal form of blood disorder with cutaneous manifestations, or that it is a malignant process akin to sarcoma, have all been put forward. The tumour masses are made up of round, or polygonal cells, bearing a resemblance to ordinary lymphoid tissue. As degenerative changes soon occur in the larger tumour masses, the typical histological appearances are best seen in the smaller tumours, or in the red infiltrated patches, where small collections of lymphoid cells are also found in the epidermis itself, a feature of some diagnostic value. Occasionally a moderate leucocytosis has been observed, and in a few cases visceral metastases have been reported, but this is an uncommon occurrence. The writer has found that in genuine examples of mycosis fungoides Altmann's granules are present in abundance in the cells forming the growth, whereas these granules are absent, or rare, in true sarcoma cells.

Symptoms

In the earliest stages there may only be intense pruritus without any obvious change in the skin. Some form of pre-mycotic eruption is more common, and this may assume the most diverse characters—psoriasiform, lichenoid, or eczematous (Fig. 177). Patches resembling seborrhœic dermatitis also occur, or the pre-mycotic lesions may be bullous or urticarial. The duration and extent of these pre-mycotic eruptions are inconstant, but they have all the distinguishing character of being intensely itchy. An initial erythrodermia is also recognised. Sooner or later well-marked dark red or brown infiltrated patches develop on the skin of the trunk, face, and elsewhere (Figs. 175 and 176). Upon these, or upon the unchanged skin, the tumour masses arise. This, the second stage, may be separated from the first or pre-mycotic by months or years. The characteristic tumours are dark red and soft, and have been aptly compared to a ripe tomato; in size they vary from small nodules to masses as large as the fist or larger (Fig. 178). They tend after a certain time to break down and form more or less extensive ulcerated fungating areas. The lymphatic glands sometimes become prominent at an early stage, or they may only become enlarged when secondary infection of the necrosing tumours takes place.

The very rare form, mycosis fungoides *à tumeurs d'emblée,* arises directly from normal skin without the usual pre-mycotic stage, and follows a rapid course, death occurring in a few months. In other cases life may be prolonged for several years—over ten years in one patient under the writer's care.

Diagnosis

In the earlier or pre-mycotic period the greatest difficulty will be experienced in arriving at a correct diagnosis. Once the infiltrated patches, or the tumours, have formed, diagnosis is relatively easy. The writer has seen the condition mistaken for tertiary syphilis, to which it bears only the most superficial resemblance. Leukæmia with pruritus presents many similarities, but is distinguished by a blood count and by other signs.

Treatment

General treatment is as a rule without effect. Improvement may follow an attack of erysipelas, and similar results have been recorded after pneumonia and influenza; this suggests that protein-shock therapy might be tried where other methods fail. In most cases X-rays can at least bring about the temporary disappearance of the tumour masses and infiltrated patches, sometimes removing them without trace, sometimes with subsequent scar formation. By this means the disease can be kept under control for long periods, although sooner or later it gains the mastery.

Sarcoma Idiopathicum Multiplex Hæmorrhagicum (Plate 96, Fig. 179)

A very rare disease, probably an infective granuloma, occurring in males over forty years and beginning on the extremities with purple patches, followed by small tumours, and finally, in some cases, by visceral metastases.

Etiology and Pathology

The cause of the so-called idiopathic hæmorrhagic or pigmentary sarcoma of Kaposi is unknown. It has been chiefly met with in the Jewish race in Russia, Poland, and Austria. In England the disease is very uncommon, and most of the recorded cases have been observed

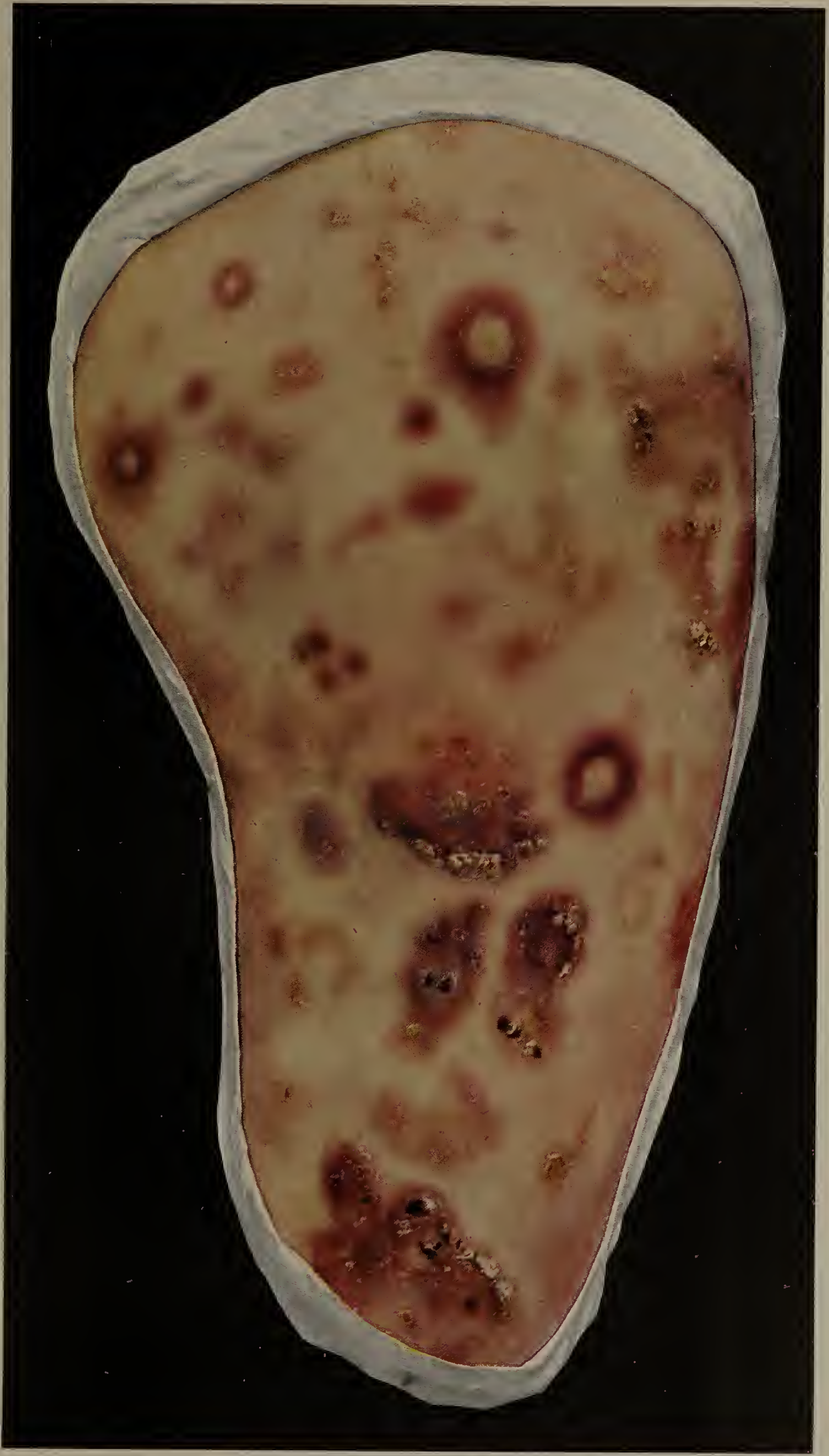

Fig. 177. Mycosis fungoides

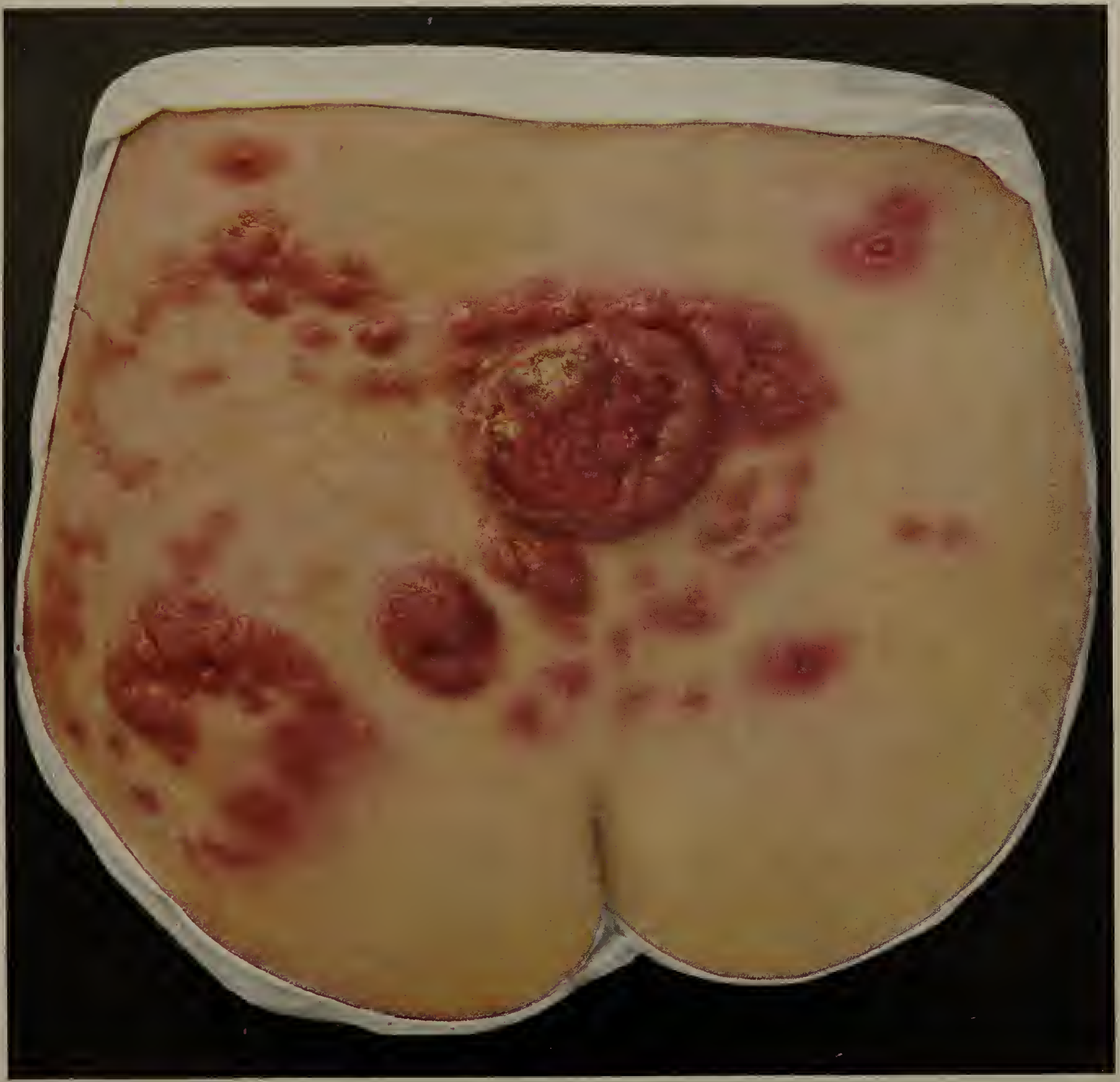

Fig. 178. Mycosis fungoides

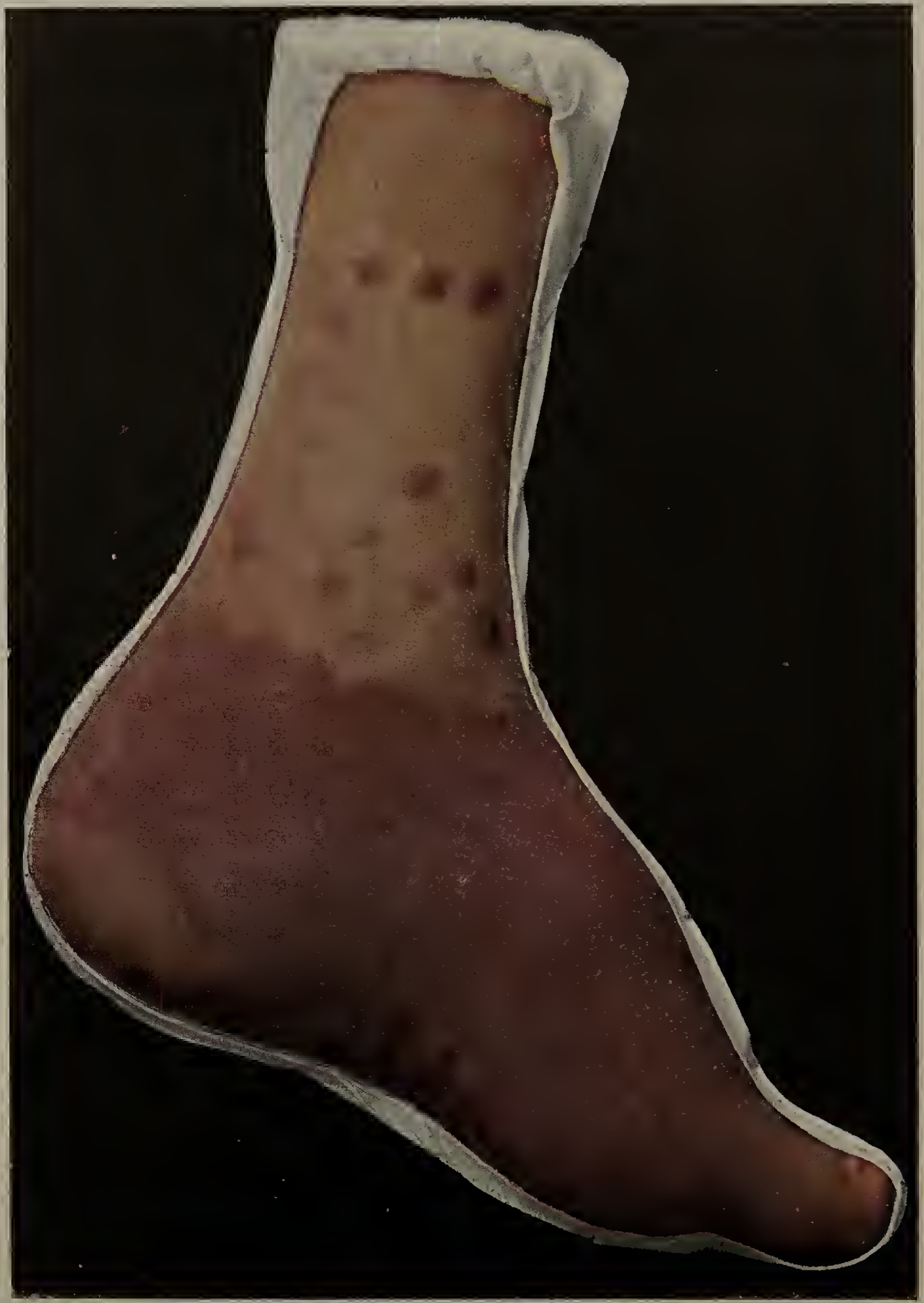

Fig. 179. Sarcoma idiopathicum multiplex haemorrhagicum

among the alien population. Although the original title is still used, the disease is not a true sarcoma, but seems rather to belong to the group of infective granulomata; in a certain number of cases the lesions have followed some form of local injury. The microscopic examination of the tumours and earlier lesions, shows the process to be made up of numerous dilated and newly formed capillaries in the corium, around which there are infiltrations of fusiform and round cells. The pigment deposited in the dermis is derived from the blood.

Symptoms

The eruption begins on the extremities, usually the feet, in the form of purple or dark red patches, flat or slightly raised. In this form they may remain for years, after which the tumours appear, either on the patches or on normal skin (Fig. 179). These little pigmented tumours vary in number and are about the size of a split-pea. The eruption is usually symmetrical, and tends to spread gradually up the limbs, a diffuse œdematous infiltration occurring. The course of the disease is protracted, and while it may clear up spontaneously, death usually occurs from hæmorrhage, metastases in the viscera, or from the results of some intercurrent malady. The lymphatic glands are not involved.

Treatment

Treatment does not appear to have very much influence on the disease. Arsenic may be given by the mouth or intravenously, and the lesions irradiated with X-rays.

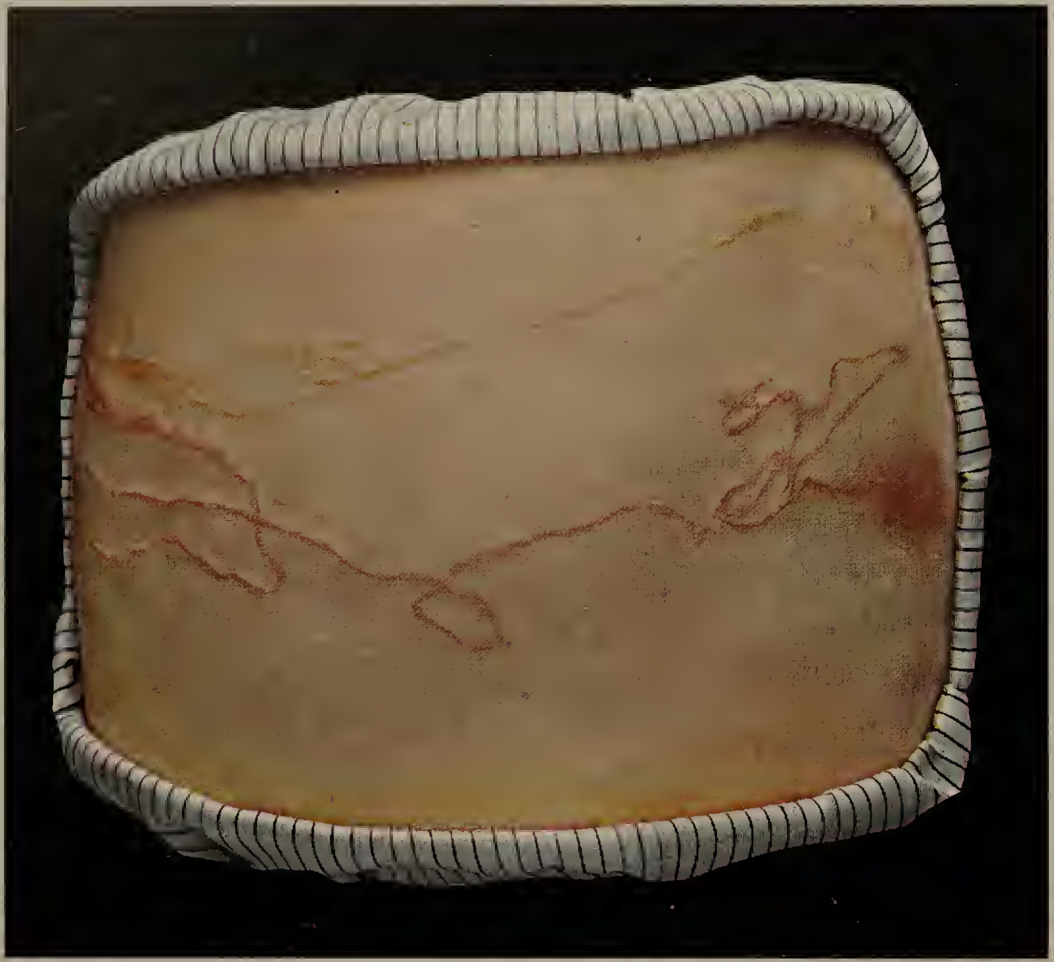

Fig. 180. Myiasis linearis

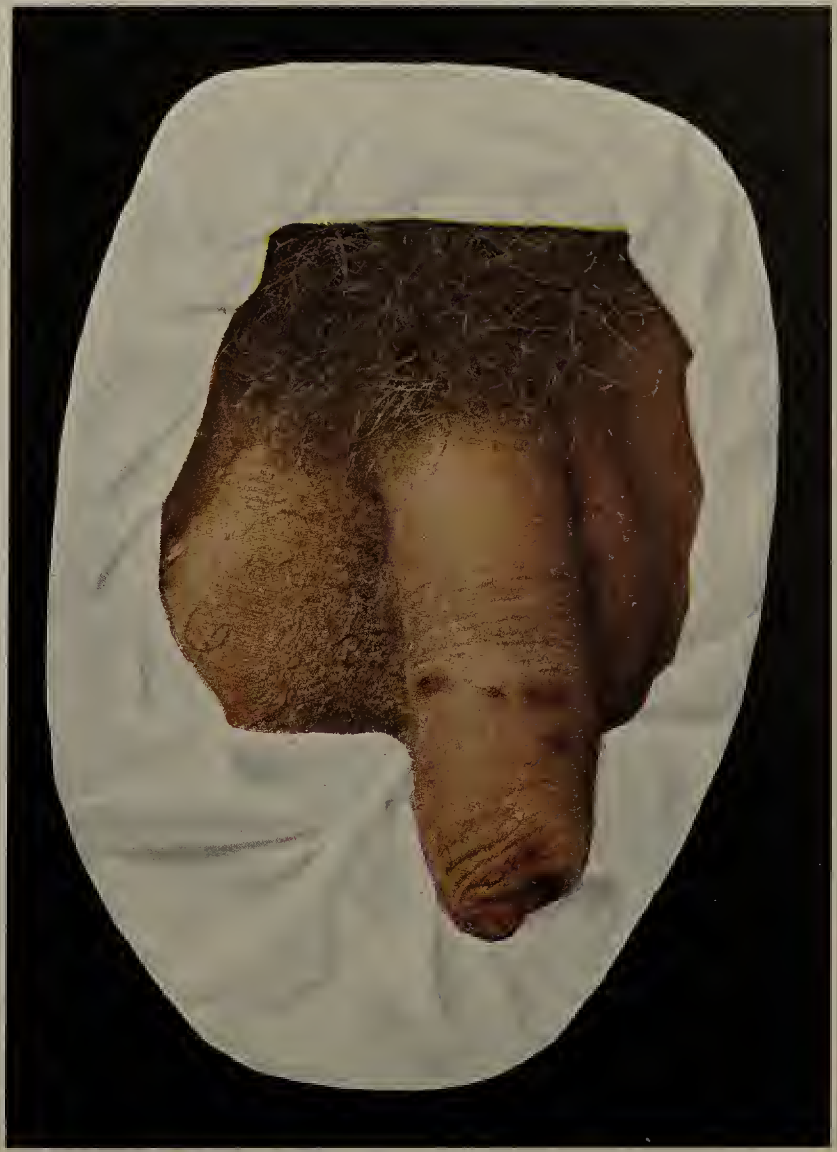

Fig. 181. Scabies

Affections Caused by Animal Parasites

Myiasis Linearis (Plate 97, Fig. 180)

Myiasis linearis, or " creeping eruption," is caused by the presence beneath the skin of the larvæ of certain flies such as Gastrophilus. The disease is met with in Southern Russia, and in many parts of the world outside Europe. A narrow red line appears on the skin, and, as the name indicates, the eruption is progressive, extending daily at one end, and at the other tending to fade and disappear. The larva may occasionally be detected as a tiny dark spot just beyond the advancing point.

Treatment

Treatment aims at the destruction of the causal parasite by local subcutaneous injections of solution of perchloride of mercury, or by excision of the progressive end of the linear eruption.

Scabies (Plates 97 and 98, Figs. 181, 182, and 183)

Scabies, or itch, is a contagious disease due to infection with the *Sarcoptes scabiei.* The female parasite produces the characteristic burrows. The patient complains of nocturnal itching, and some degree of secondary pyodermia is common.

Etiology and Pathology

Scabies is met with at all ages and in every class of society. It results either from direct contact with an infected person, or indirectly through the medium of infected clothing or bedding, but to be effective the contact must be prolonged and intimate. The disease is sometimes of venereal origin, or may be contracted from the bedding in hotels, lodgings, and the like. The incubation period varies according to circumstances, and is generally about seven to ten days. Many of the lower animals, such as the dog, cat, and horse, suffer from scabies caused by closely allied parasites, and some of these forms can be communicated to man.

The male acarus is rarely observed; it remains on the surface of the skin, dying after copulation. The female is larger than the male, the tiny parasite being just visible, on the point of a pin, to the naked eye. After impregnation, the female burrows beneath the skin, forming a tunnel in which she deposits eggs, from which the young emerge in about seven days.

Symptoms

Itching is an early and characteristic symptom of the disease, and may even occur before any recognisable form of eruption has developed. This itching is nocturnal, beginning when the affected individual becomes warm in bed, and may be very severe. In uncomplicated cases the eruption is polymorphous, including burrows, vesicles, and papulo-vesicles. The pathognomonic burrow is especially seen on the fingers and wrists as a dark, curved, or sinuous line, about one-eighth of an inch in length (Fig. 183). This tunnel or cuniculus contains the ova and fæces, and, at the distal extremity, the mature female. Tiny vesicles, or little red papules capped with a vesicle, are also found, the former generally on the hands, the latter on the abdomen and elsewhere. The vesicular contents may become purulent (Figs. 182 and 183). The distribution of the eruption is special and distinctive. The lesions occur on the hands —especially the webs of the fingers—the wrists, anterior axillary folds and abdomen, and also on the feet and ankles; typical burrows are rarely observed on regions other than the extremities. In men, the penis is generally affected with papules or impetiginous crusts (Fig. 181), an important diagnostic feature; in women the breasts and in infants the feet may be markedly involved. The eruption only extends above the neck in nurslings, whose cheeks sometimes become infected from the mother's breast.

Where scabies is complicated by secondary pyodermia, the causal condition may be masked and even overlooked. The impetiginous eruption has a special distribution over the lower buttock region, the elbows, and knees; impetigo in any, or all these situations, should suggest scabies.

Diagnosis

The distribution of the eruption and the nocturnal itching are so characteristic that diagnosis is, as a rule, easily made. Burrows, when present, are definite evidence of the nature of the complaint, but they are not always well marked; from them the parasite can be extracted with a pin for microscopical examination. The infected forms are often mistaken for simple impetigo, the significance of the grouping of the impetiginous lesions on the lower buttocks, elbows, or knees not being always appreciated. Where scabies is of venereal origin, the lesions on the penis may be regarded as syphilitic, and it should not be forgotten that both diseases are sometimes contracted at the same time. On the hands the eruption of dysidrosis bears some resemblance to itch, but the vesicles are deeper, and there are no confirmatory lesions elsewhere.

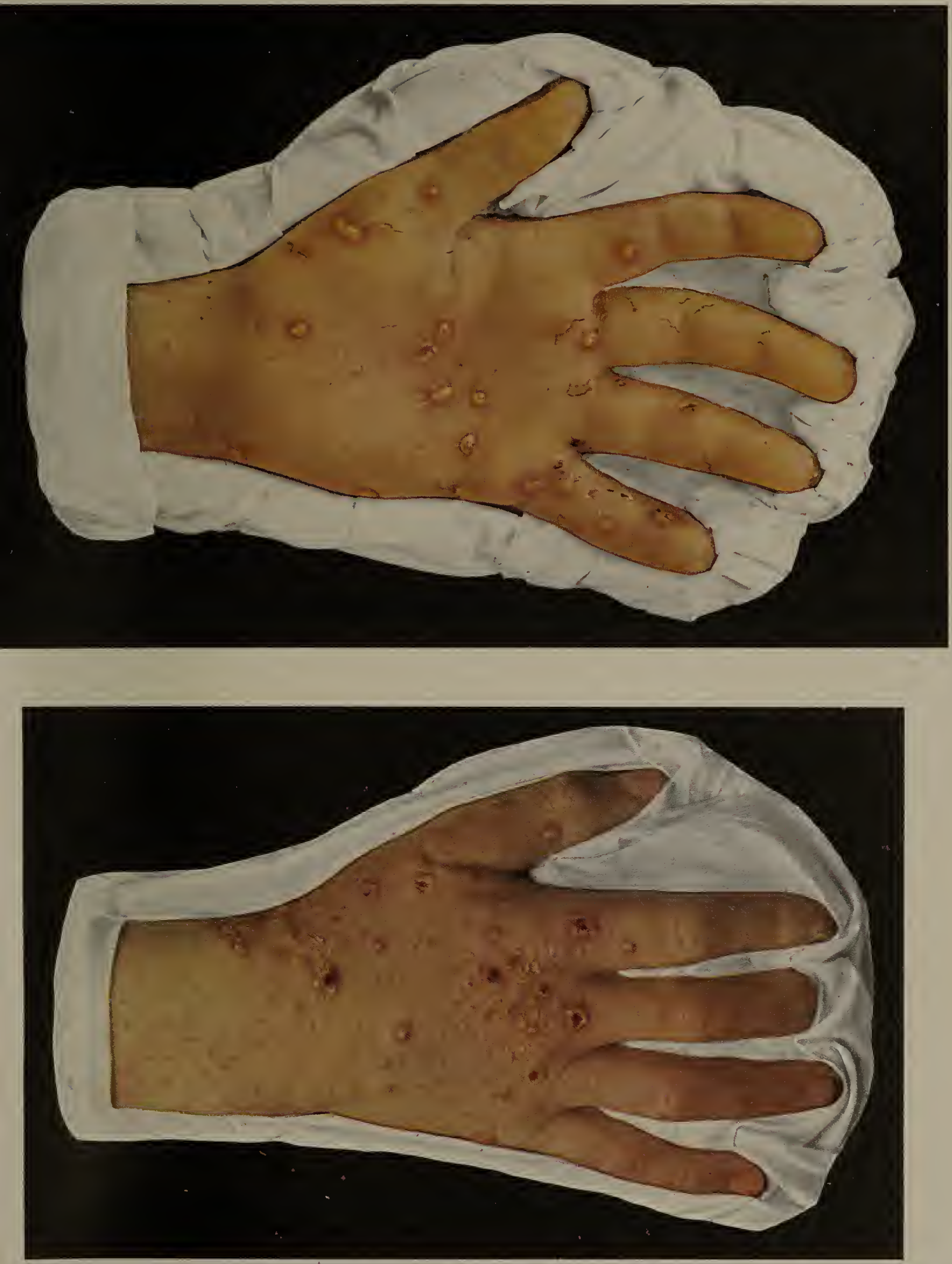

Fig. 182 and 183. Scabies

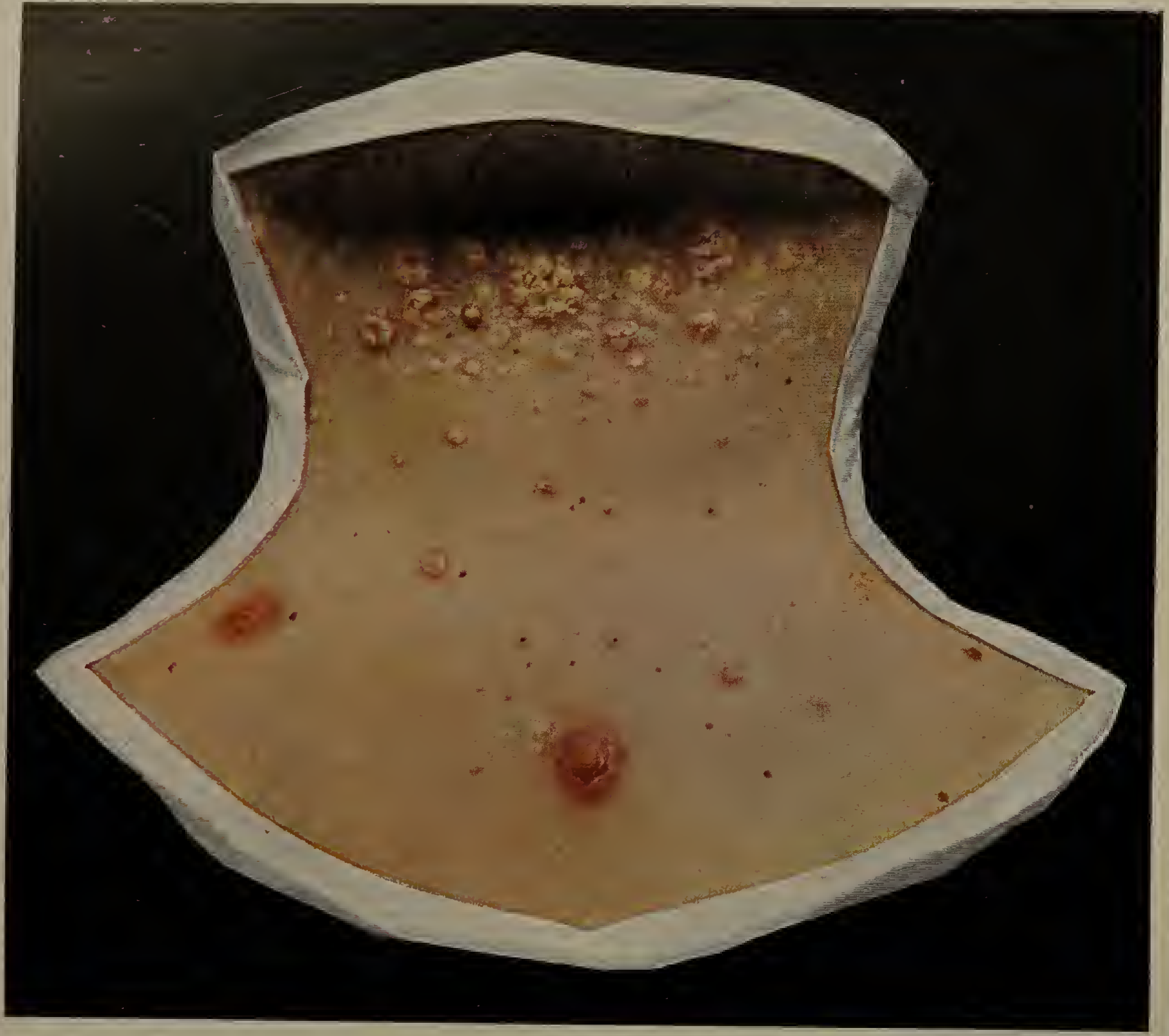

Fig. 184. Pediculosis capitis; Pyodermia

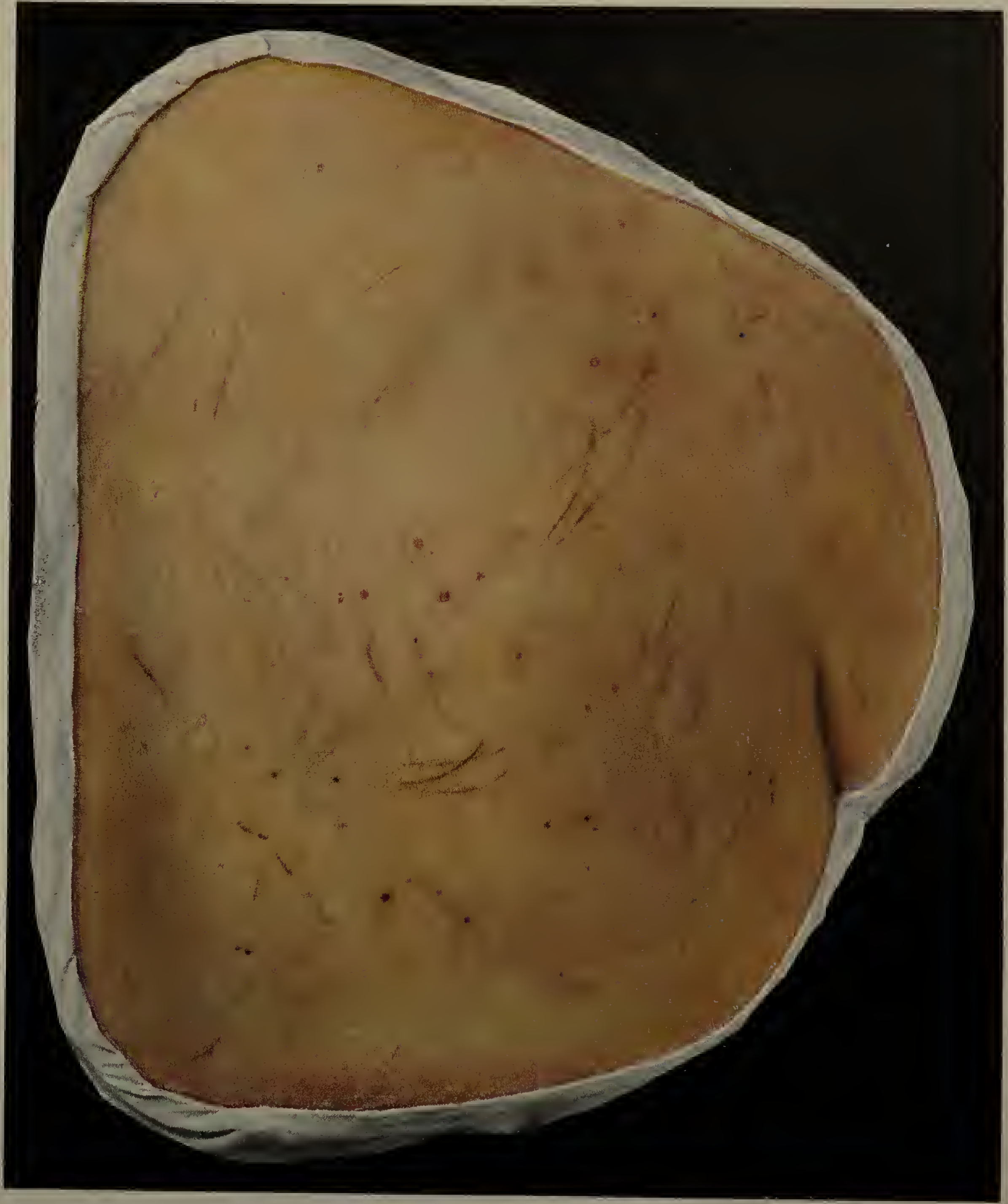

Fig. 185. Pediculosis vestimentorum

Treatment

If untreated, the disease may last indefinitely, but cure is rapid where the proper methods are adopted. Treatment is local, and aims at destruction of the parasite and ova on the body; the clothing and bedding must also be disinfected to prevent reinfection from them. The patient is given a warm bath to soften the skin, the burrows being opened by thorough soaping and friction with a soft brush. If sulphur ointment is used, it is rubbed in all over the body below the neck, and especially into the feet and hands, on three consecutive days; then a second bath is taken. All the patient's bedding and clothing, such as gloves, socks, undergarments, etc., should have been disinfected during this period, otherwise reinfection will occur. This routine must be rigidly followed, as any deviation from it may result in failure.

Sometimes the skin is irritated by the sulphur, and dermatitis and itching are complained of some days after the last application. This is not to be interpreted as a relapse, and is easily relieved by simple ointment or powder. Sulphur ointment is objectionable because of its smell and greasy character. An ointment of β-naphthol (2 to 5 per cent.) may be used instead, or a series of three sulphur baths may be given, made either with colloidal sulphur or potassa sulphurata. The formula suggested by Marcussen* has the advantage of curing the disease and disinfecting the clothing, but only the clothing worn at the time the application is made.

Impetigo and furunculosis, if present, are treated in the usual manner. As the patient's skin may be a little irritated from the parasiticide, baths should be avoided for some days. In infants and young children the applications may be used in half strength. Where more than one member of a family is infected, all should receive treatment at the same time; if this is not done, reinfection may occur from the carrier.

Animal Scabies

The human subject may be infected from dogs, cats, and horses. The characters of the eruption differ from those seen in the typical form of the human disease. Thus, burrows are never present, and the face may be affected both in canine and cat scabies. The eruption in cat scabies is usually limited to the regions coming into contact with the animal, such as the face, neck, and arms. The eruptive elements consist of itchy papules, or small urticarial lesions. Diagnosis is made by the history, and sometimes by the occurrence of the disease in several members of a family. Cure is easily obtained by mild parasiticides.

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* "The Danish Treatment of Scabies," *Journal of the Royal Army Medical Corps*, vol. xlii., p. 287.

Pediculosis (Plates 99 and 100, Figs. 184 to 187)

Lice infest the head, body, and pubic and axillary regions. They occasion considerable itching and scratching, as a result of which secondary pyodermia may develop. The body louse is specially important as an agent in the spread of typhus, relapsing, and trench fevers.

Pediculosis Capitis (Fig. 184).—This form of the disease, where the scalp is affected, is very common in hospital practice; children form the greater proportion of the patients. The head louse, or *Pediculus capitis*, is about 1 to 3 mm. in length, of a gray colour when found on Europeans and black in the African races. The itching is generally severe and continuous, but there are some individuals who appear to tolerate the insect, and in whom the degree of discomfort is relatively slight. The condition is always most marked on the nape of the neck, where a secondary impetigo may develop and spread thence over the scalp (Fig. 181); this may lead to enlargement and even suppuration of the neighbouring lymphatic glands. On examination of the head, the insects can be detected, often in considerable numbers; the ova attached to the hairs are seen as little white bodies easily identified under the microscope. In extensive and long-standing cases some degree of secondary dermatitis is occasionally found on the neck and shoulders. The diagnosis is made without difficulty by the recognition of the causal parasite and its ova. The condition, indeed, is only liable to be overlooked when its nature is not suspected either from the social position of the patient, or because it is masked by secondary impetigo. Impetigo at the nape of the neck should always suggest pediculosis capitis.

Treatment.—Paraffin oil kills the insects and destroys the nits, and loosens them by dissolving their chitinous attachment. The head should be well washed in a basin of water to which paraffin oil has been added; the hair is then dressed with paraffin oil and loosely enveloped in a towel for the night, the ova being subsequently removed with a fine comb. In boys, as a preliminary step the hair may be cut very short. Hats and brushes must be destroyed, or disinfected, to prevent reinfection.

Pediculosis Vestimentorum (Figs. 185 and 186).—The body louse, a gray insect about 3 mm. long, inhabits the clothing, where the female deposits her eggs in the seams. It may happen that on examination of the patient no lice are seen, only the itching and scratch marks indicating the nature of the condition. Nits are occasionally attached to the lanugo hairs on the back, and during the late war it was shown that, in heavily

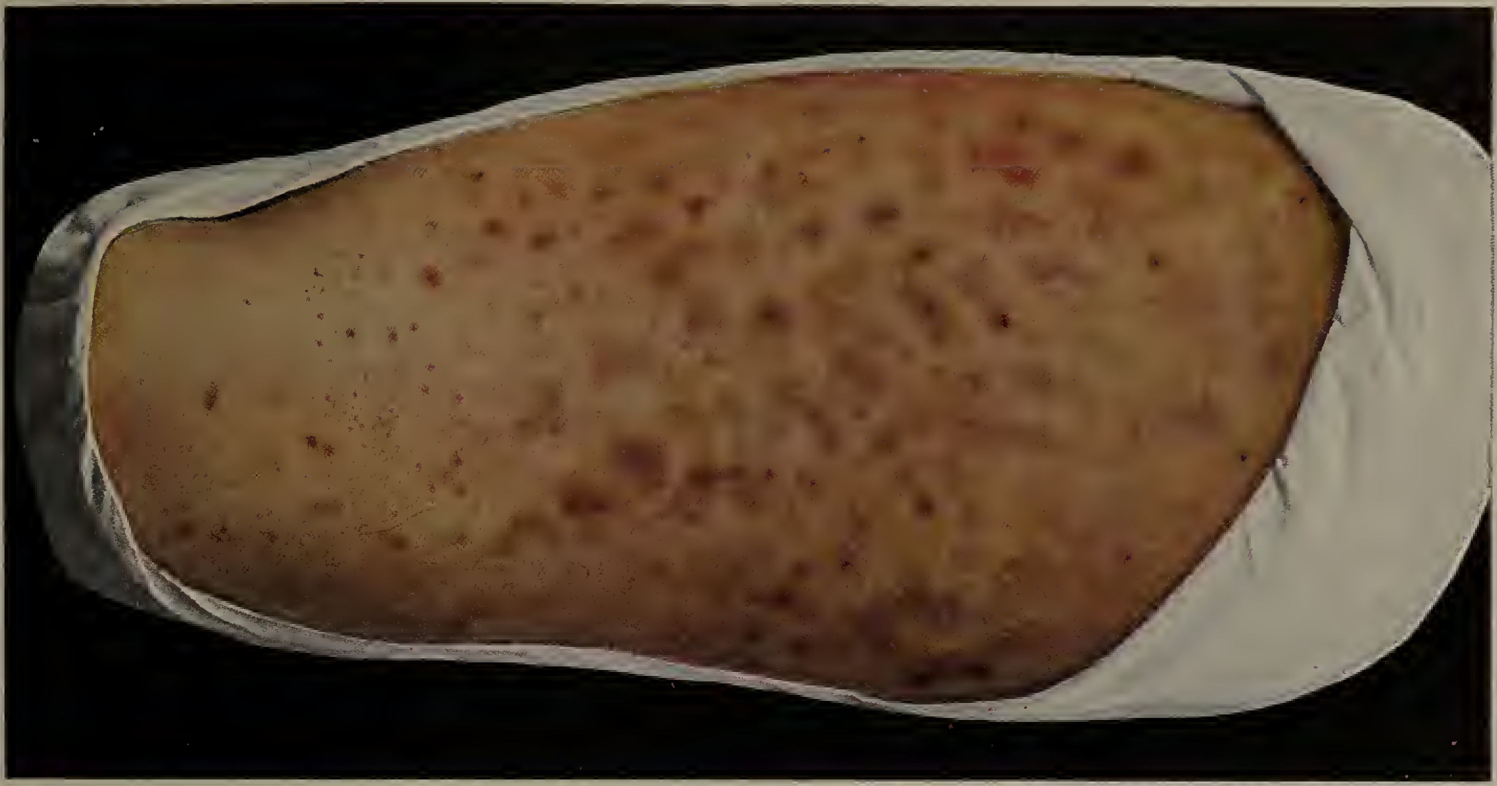


Fig. 186. Melanodermia e pediculis vestimentorum

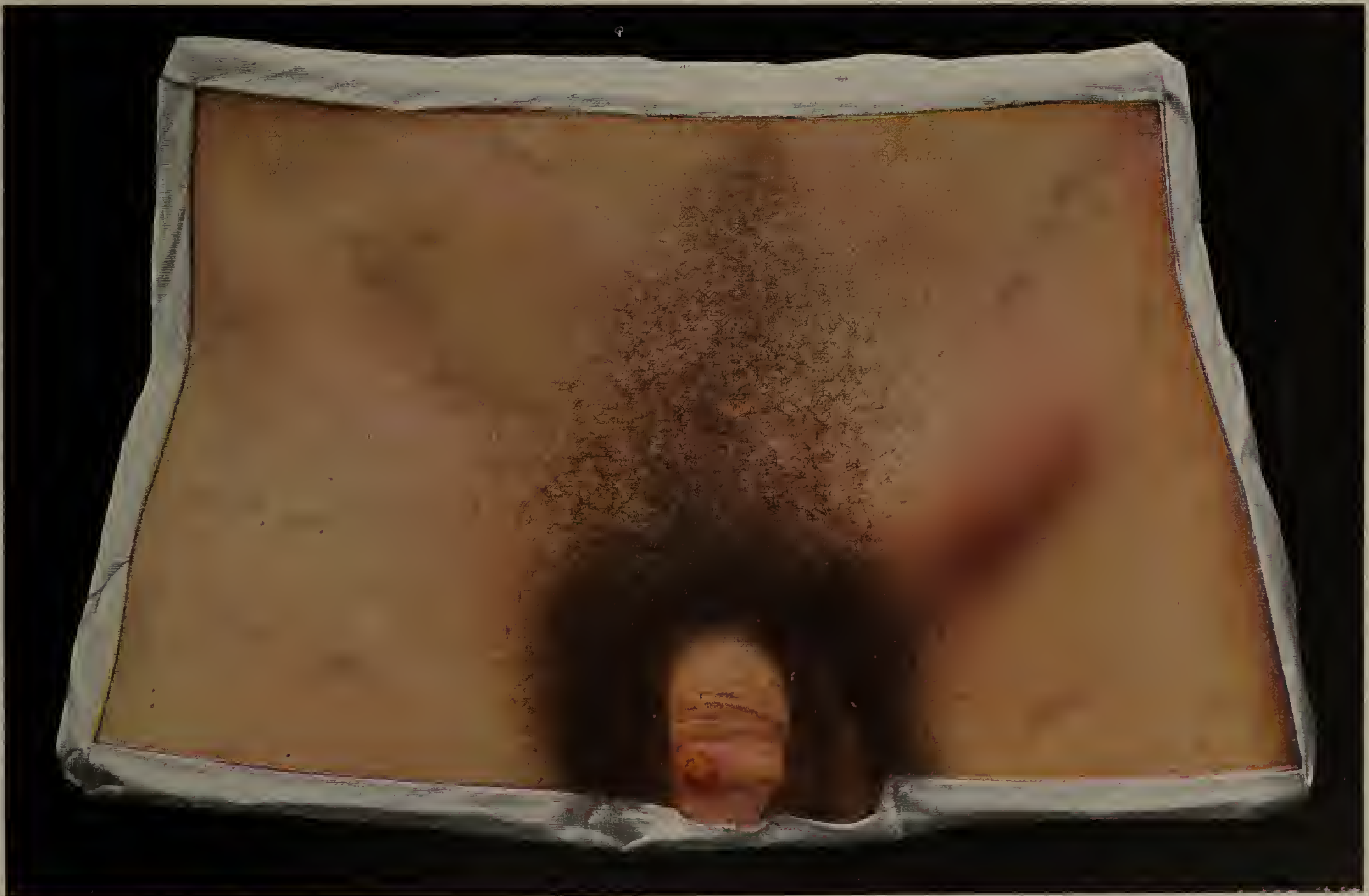


Fig. 187. Maculae caeruleae (Ulcus molle elevatum, Bubo inguinalis)

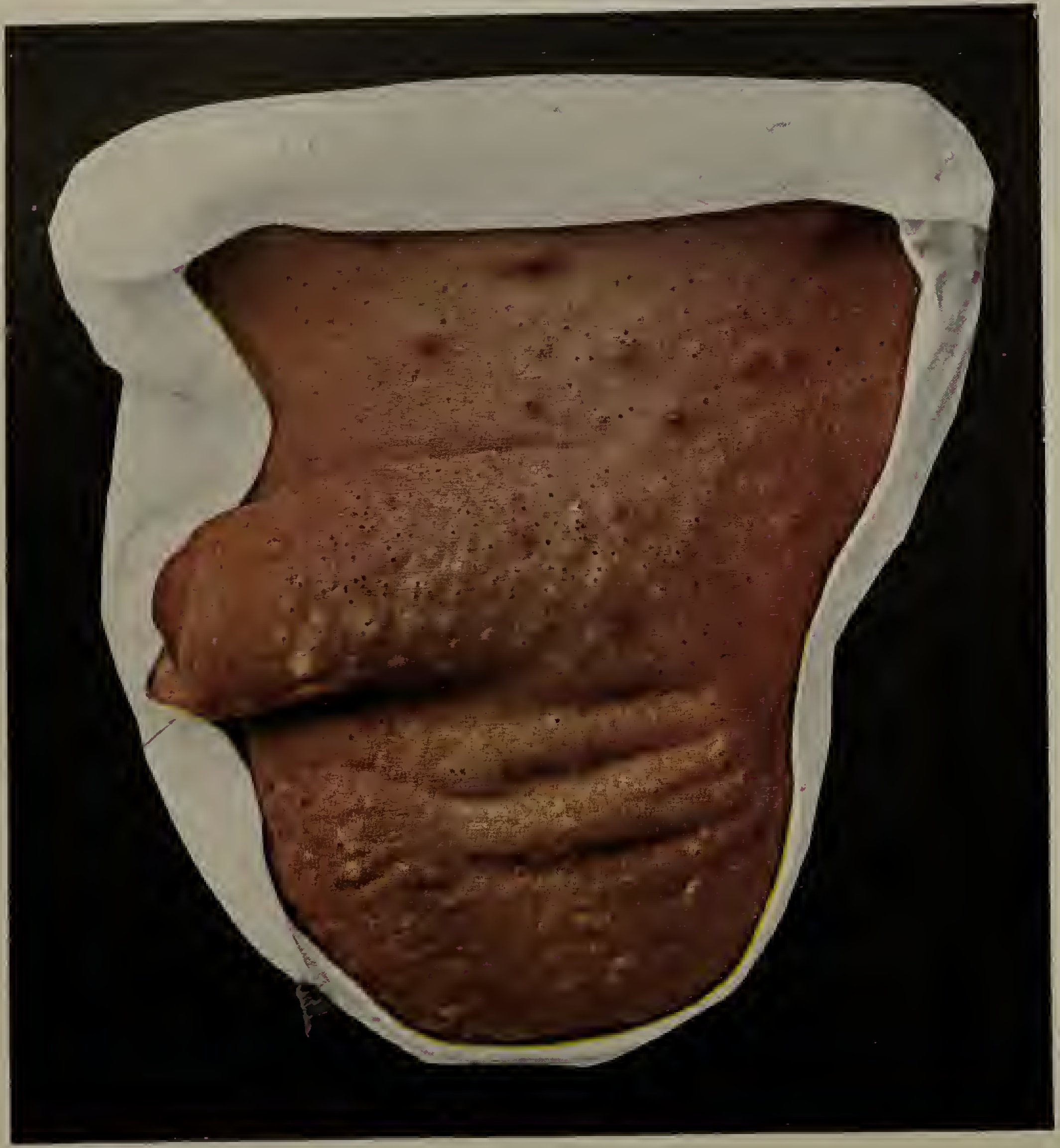


Fig. 188. Acne e fabricatione Chlori

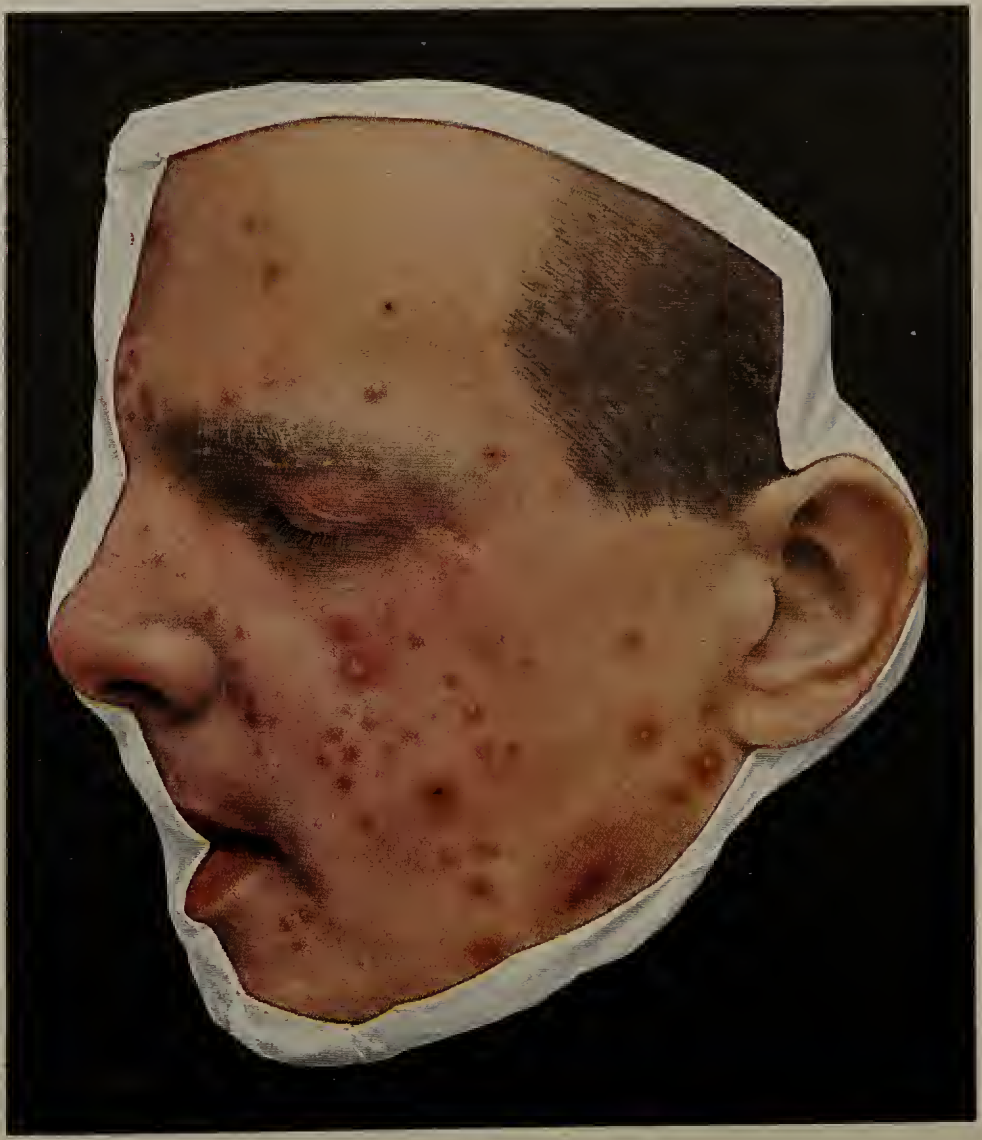


Fig. 189. Toxicodermia ex usu Iodi acneiformis

infested soldiers, the ova could be deposited on the hair of the pubic region. The principal lesions are linear excoriations over the shoulders, abdomen, lumbar region, and thighs; a certain variable number of red puncta or tiny papules may develop on the trunk and limbs from the bites of the insects. Pigmentary patches, which sometimes become generalised, and even affect the mucous membranes, have been observed in old-standing cases, generally in individuals of the tramp class, constituting, in an extreme degree, the so-called vagabond's disease (Fig. 186).

Diagnosis.—The disease is chiefly met with in adults. Scabies may be suggested by the nocturnal itching, but the distribution and form of the eruption is different, and the secondary impetigo, when it occurs, is not grouped over the lower buttocks, elbows, and knees. Diagnosis is confirmed by the discovery of the parasites or their ova on the underclothing.

Treatment is mainly concerned with the disinfection of garments and bedding, because it is upon these, and not upon the body, that the insects and ova are principally found. Hot baths with plenty of soft soap will usually remove any wandering lice from the individual, but it should be remembered that nits may be present on the fine hair on the back, or may even be deposited in the pubic region. Preventive measures include dusting N.C.I. powder (naphthalin 96, creosote 2, iodoform 2) on the seams, and rubbing Vermijelli on the fold of the trousers.

Pediculosis Pubis (Fig. 187).—The insect and its ova are most often found on the strong hair of the pubis, but may also be met with in the axillæ, and in children on the eyelashes. The parasite is from 1 to 2 mm. in length, is shorter and rounder than the other varieties, and is supposed to bear some resemblance to a crab. Pediculosis pubis is contracted from lavatory seats and from infected bedding, or may be of venereal origin. In the last case other venereal diseases, such as soft chancre, are occasionally also present (Fig. 187). Attention is generally drawn to the condition by the itching, and the diagnosis is confirmed by discovering the parasite and the ova. In certain cases peculiar slate-blue spots develop over the abdomen and thighs (maculæ ceruleæ, Fig. 187) from the bites of the insect.

Treatment.—The disease is easily cured by mercurial ointments, such as ammoniated mercury, 10 to 15 grains to the ounce. The popular blue ointment is speedy and efficacious, but may cause considerable dermatitis and even stomatitis.

Toxicodermiæ: Drug Eruptions

A great many drugs, including those in everyday use, can, when taken by the mouth or applied to the skin, give rise to eruptions, of which the erythematous and erythemato-urticarial are the commonest forms. The rash appears shortly after the absorption of the causal medicament, and may be accompanied by some degree of constitutional disturbance, such as fever, although this is unusual. If the cause is discovered and suppressed, the rash as a rule fades in a few days, leaving no trace of its former presence, or only a slight desquamation. In certain cases the elements are distinctly scarlatiniform, or morbilliform; in others the rashes of food poisoning or of certain recognised skin diseases are imitated. Drug eruptions are not infrequently diagnosed wrongly, because they are not thought of as the possible explanation of some unusual rash; except in the case of arsenic, and the bromides and iodides, there is usually nothing in the character of the eruption to indicate the causal drug, and this can only be ascertained as a rule from the history given by the patient. A drug eruption may be suspected from the unusual distribution of the rash, from its itchy character, and polymorphous or erythemato-urticarial aspect, or because its features do not altogether correspond with those of the disease it imitates. Confirmatory evidence is sometimes obtained by the discovery of the drug in the urine. Eruptions coming out suddenly after some drug has been taken for the first time are supposed to be due to hereditary predisposition or idiosyncrasy, and the patients who react in this manner often exhibit a peculiar sensitiveness to other substances besides drugs. In other cases the individual may have taken the drug over a prolonged period without ill-effect, and then suddenly becomes sensitised, a condition allied to, but not identical with, true anaphylaxis. Defective elimination and accumulation of the drug in the tissues may also be factors in the causation of drug eruptions, and it is generally believed that those suffering from renal or cardiac disease are more susceptible than healthy individuals.

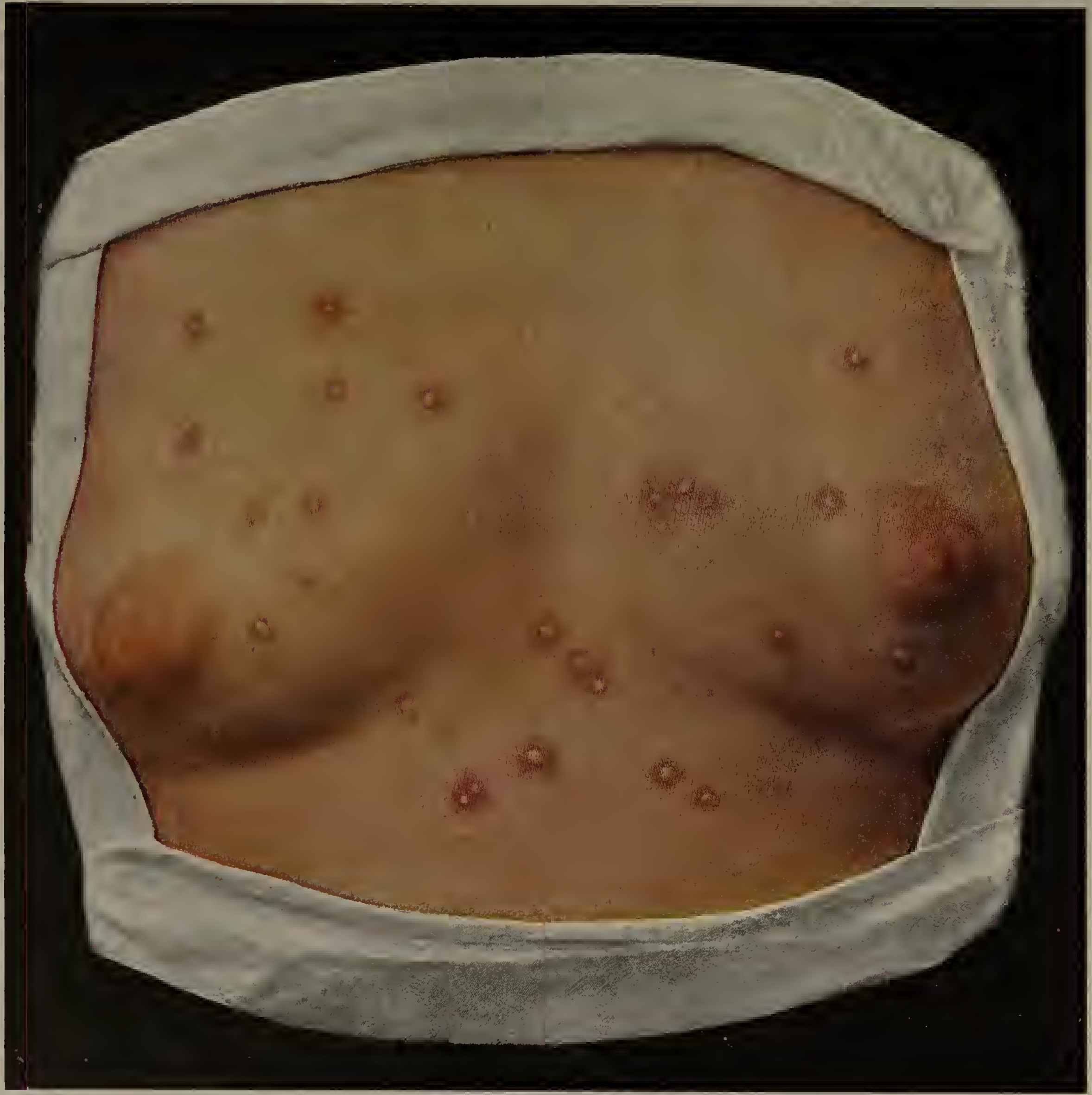


Fig. 190. Toxicodermia ex usu Iodi acneiformis

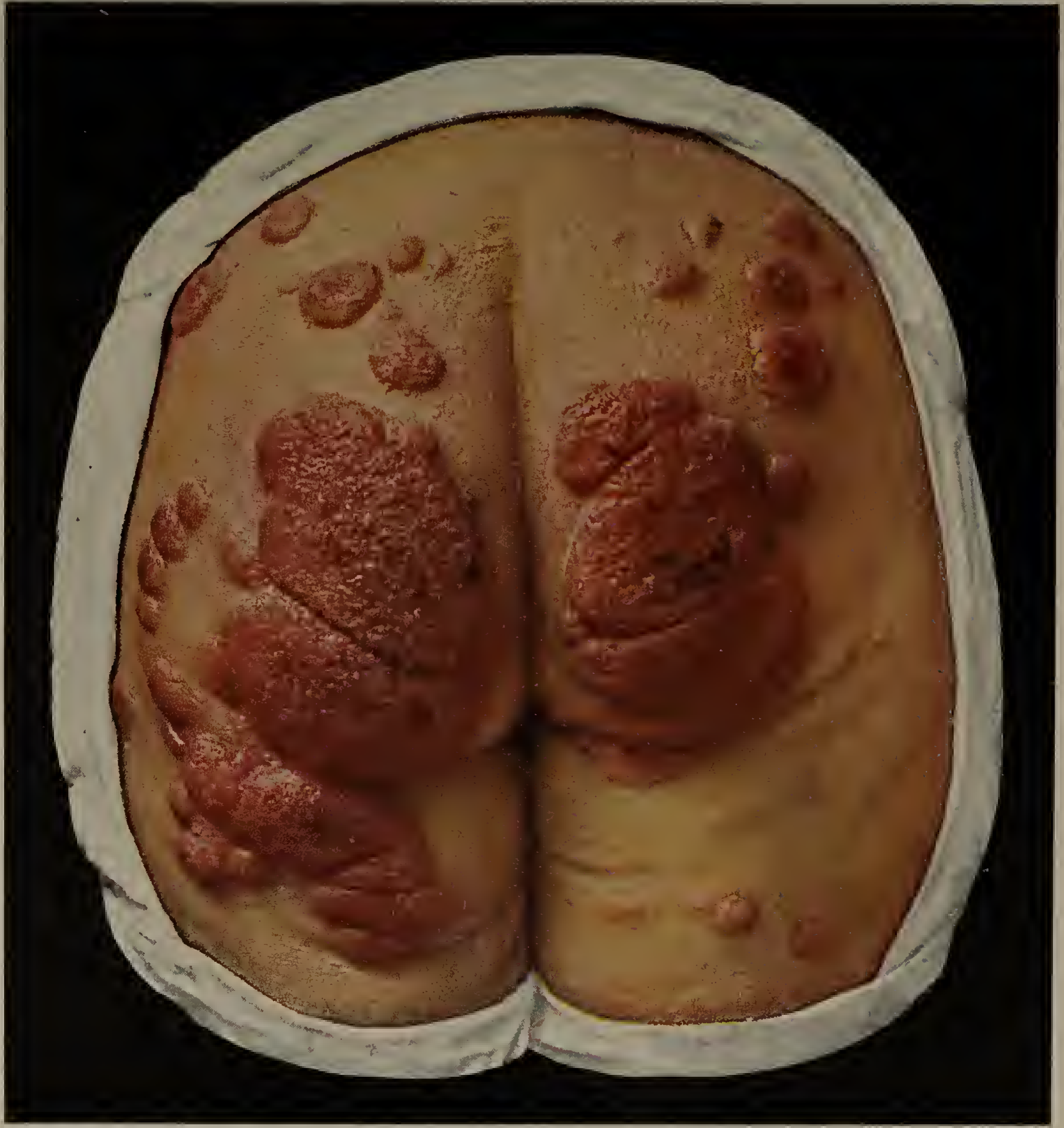


Fig. 191. Toxicodermia ex usu Bromi vegetans

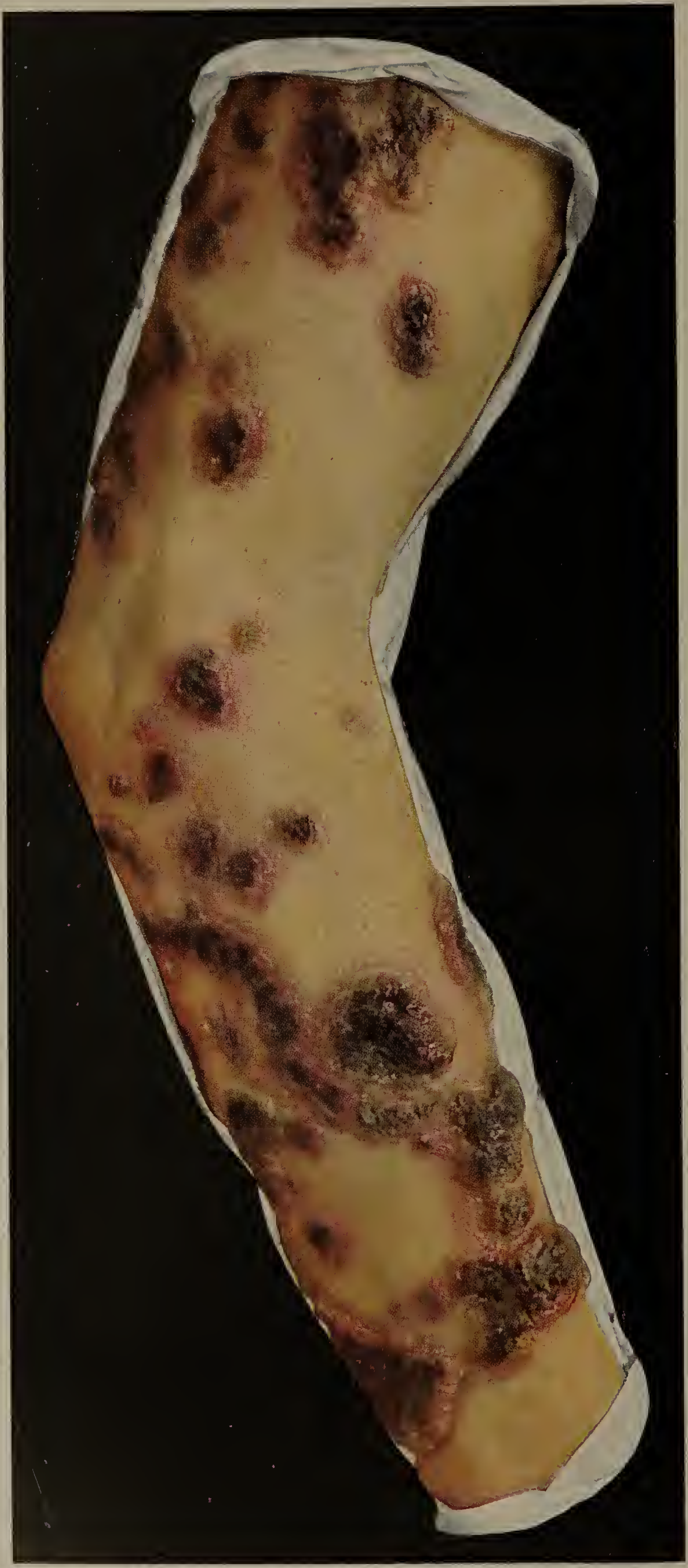


Fig. 192. Toxicodermia ex usu Bromi vegetans

Chlorine and Tar Acne (Plate 101, Fig. 188)

Both these conditions are examples of dermatitis medicamentosa from external irritants. Chlorine and tar acne are in many respects similar, and are met with in those whose occupation brings them into contact with these substances—for example, workers in factories where electrolysis of sodium chloride is carried out. The lesions resemble those met with in ordinary acne,comedones and papulo-pustules developing on the penis, scrotum, arms, and elsewhere. In tar workers warty growths sometimes appear (tar mollusca), which may undergo malignant degeneration. Tar acne is also observed in patients who are under treatment with ointments containing some preparation of tar—for example, oil of cade.

Iodides (Plates 101 and 102, Figs. 189 and 190)

Eruptions caused by iodides are much less common since the introduction and general use of the arsenical compounds in the treatment of syphilis. The acneiform eruptions resemble true acne vulgaris, and may occur in similar situations, but differ in the absence of comedones (Figs. 189 and 190). Iodides may also produce bullæ, especially on the face and neck, and these may be replaced, in unduly sensitive individuals, by vegetating masses. Large tuberous lesions resembling gummata or sarcomata are occasionally met with; the resemblance of some of these forms to syphilitic eruptions has led to unfortunate results where the drug has been pushed or continued with the object of curing the supposed syphilitic rash.

Bromides (Plates 102 and 103, Figs. 191 and 192)

Acneiform eruptions are very common in patients taking bromides over long periods for conditions such as epilepsy. The vegetating or anthracoid type of lesion is less well known, although very characteristic; the elements consist of raised, soft, red masses, with a papillomatous or a crusted surface, beneath which numerous purulent points are observed (Figs. 191 and 192). They are especially found on the legs, thighs, and face, but may occur in any situation, and are often first observed on vaccination or other scars. Infants at the breast are sometimes similarly affected, the drug or toxic substance being conveyed through the mother's milk.

Treatment

Bromide eruptions often persist long after the drug has been discontinued. The addition of small doses of liquor arsenicalis may prevent the acneiform rash at the expense of arsenical keratosis and pigmentation. The salt treatment suggested by Stevenson consists in the administration of 60 grains daily of sodium chloride in salol-coated tablets; this hastens the excretion of the bromides. The possibility of irritating the kidneys should be remembered; nephritis, if present, is a contra-indication.

Mercury (Plates 104, 105 and 106, Figs. 193 to 196)

Mercurial eruption may be due to the external application of mercurial ointments, or to oral administration or hypodermic injection. The application of blue ointment to the groins and axillæ in the treatment of pediculosis, may be followed by an acute dermatitis in these regions, with which stomatitis may be associated. Mercury, taken by the mouth or injected intramuscularly or intravenously, can give rise to erythematous eruptions similar to those caused by other drugs (Fig. 193). In its more severe or malignant form, an exfoliative dermatitis with well-marked erythrodermia is developed (Fig. 194). Other signs of intoxication, such as diarrhœa, albuminuria and fever, accompany the rash, and a fatal result is not infrequent. Mercurial stomatitis is relatively common; in the lesser forms the gums may simply become sore and tender, or in more marked cases superficial ulcers may develop about the teeth, especially the upper and lower incisors, and in the neighbourhood of the lower molars (Fig. 195). Mercurial angina is an uncommon and serious condition; the tongue becomes coated with a white membrane and a similar membrane develops on the fauces; there is a constant flow of saliva, the breath is horribly offensive, and the patient is seriously ill. These conditions can be prevented by paying attention to the mouth and teeth, and by a prudent use of the drug. Where, in spite of all precautions, some form of mercurial intoxication occurs, relief can usually be obtained by pure sodium thiosulphate given intravenously in doses of 0·6 to 0·9 gramme dissolved in sterile distilled water. The condition differs from the blue line seen at the margin of the gums in lead poisoning (Fig. 197).

Copaiba (Plate 107, Fig. 198)

The balsamic drugs, such as copaiba, cubebs, and sandal-wood oil, give rise to intensely itchy, erythematous eruptions, most marked on the extensor surfaces and over the thighs. The lesions are often distinctly urticarial, and may be covered with tiny pustules, or vesicles. Such rashes are now less common, because these drugs have no longer the same vogue in the treatment of gonorrhœa.

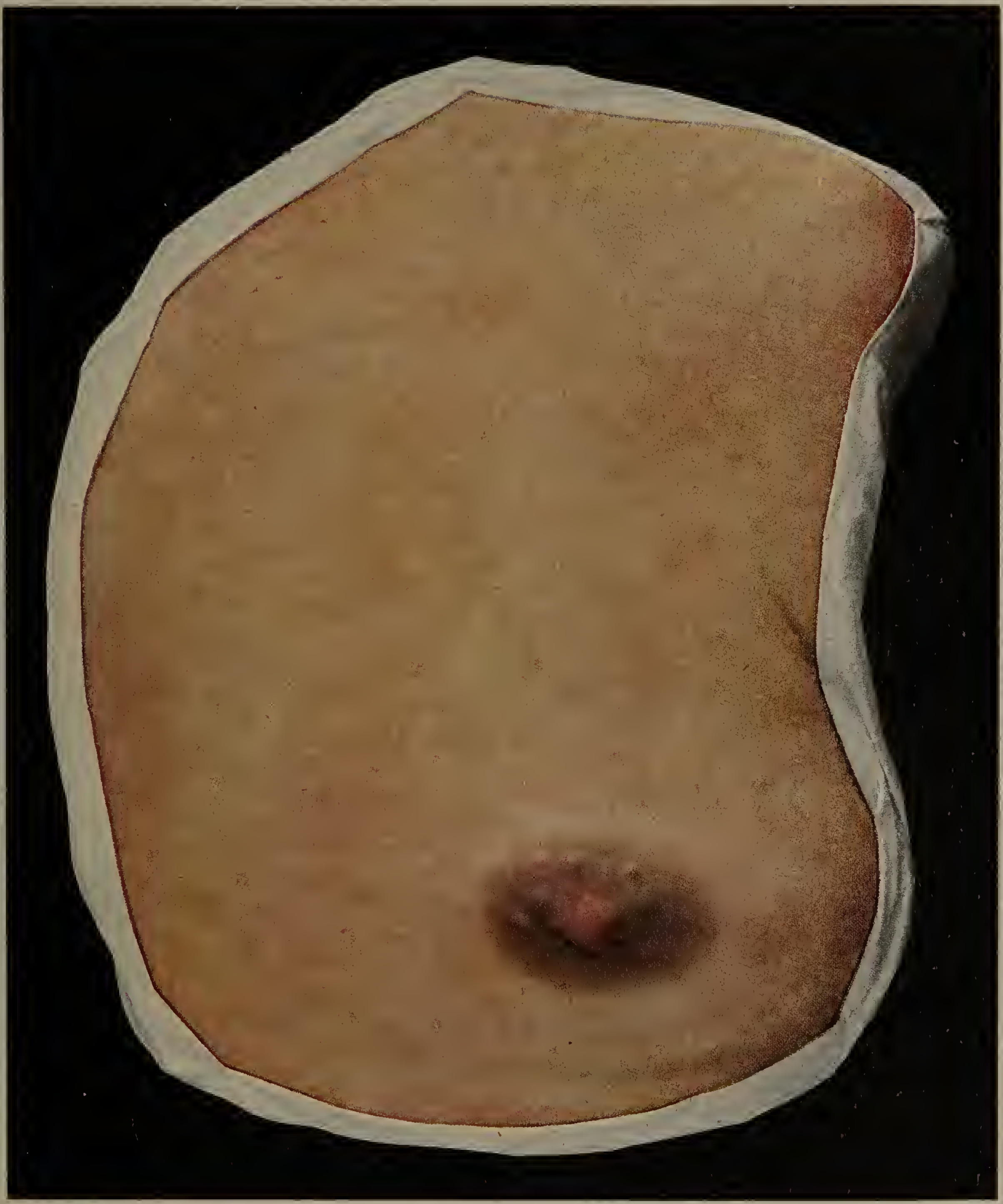


Fig. 193. Toxicodermia mercurialis erythematosa

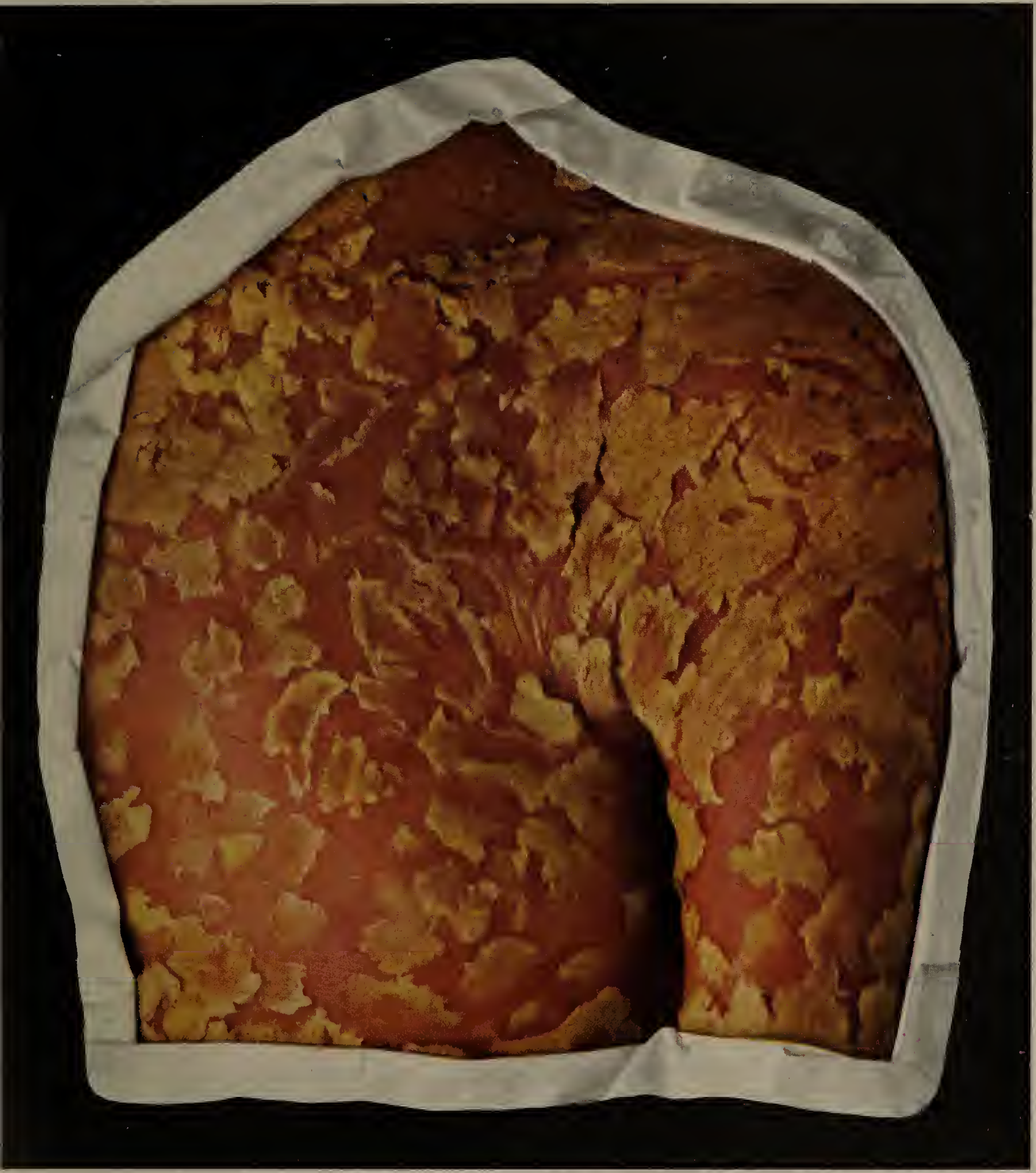


Fig. 194. Toxicodermia mercurialis (Desquamatio lamellosa)

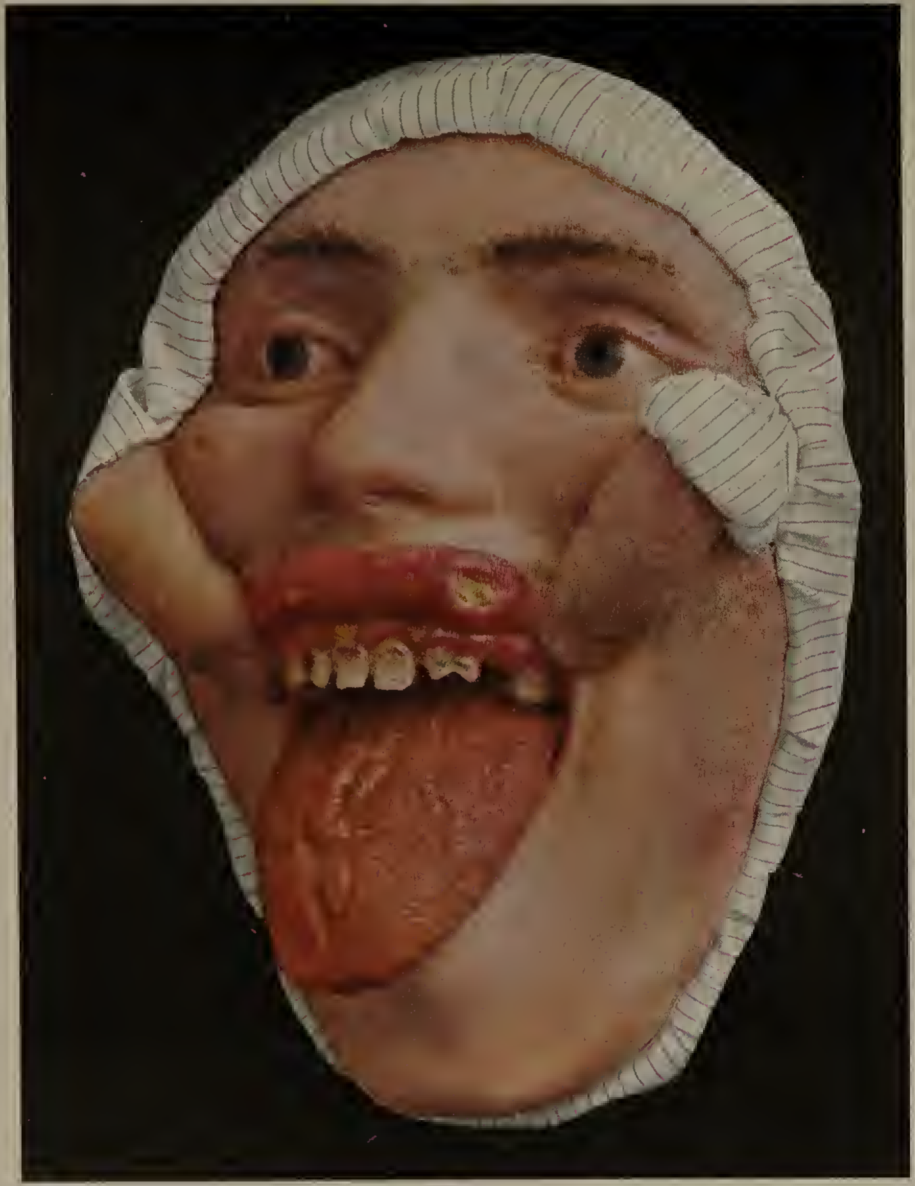


Fig.195. Stomatitis mercurialis

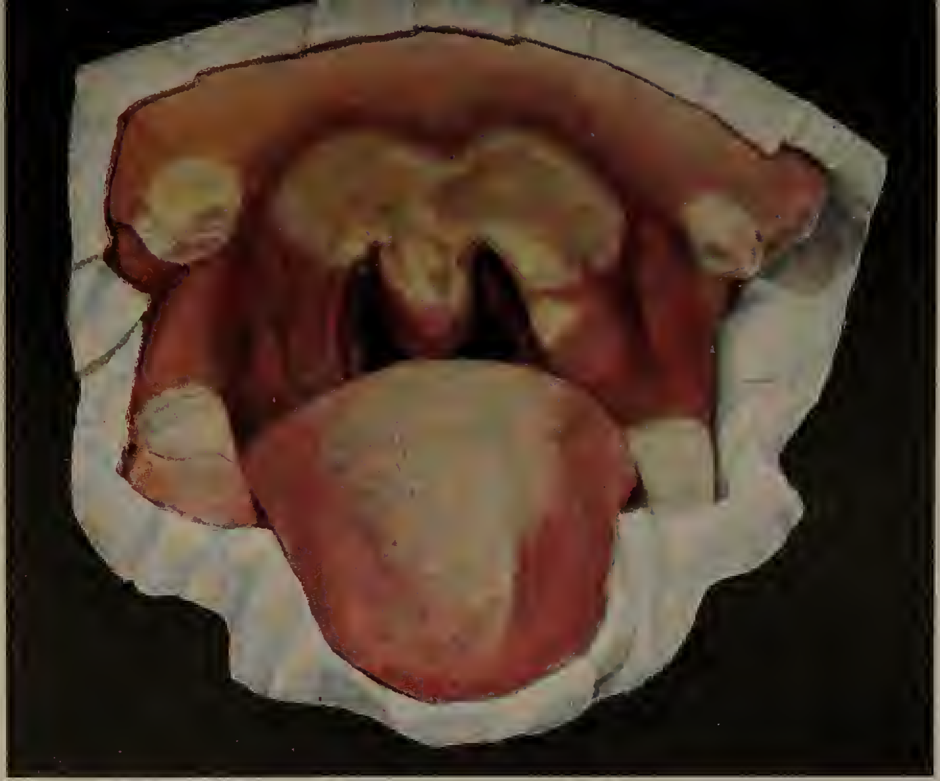


Fig . 196. Hydrargyrosis mucosae oris (Angina mercurialis)

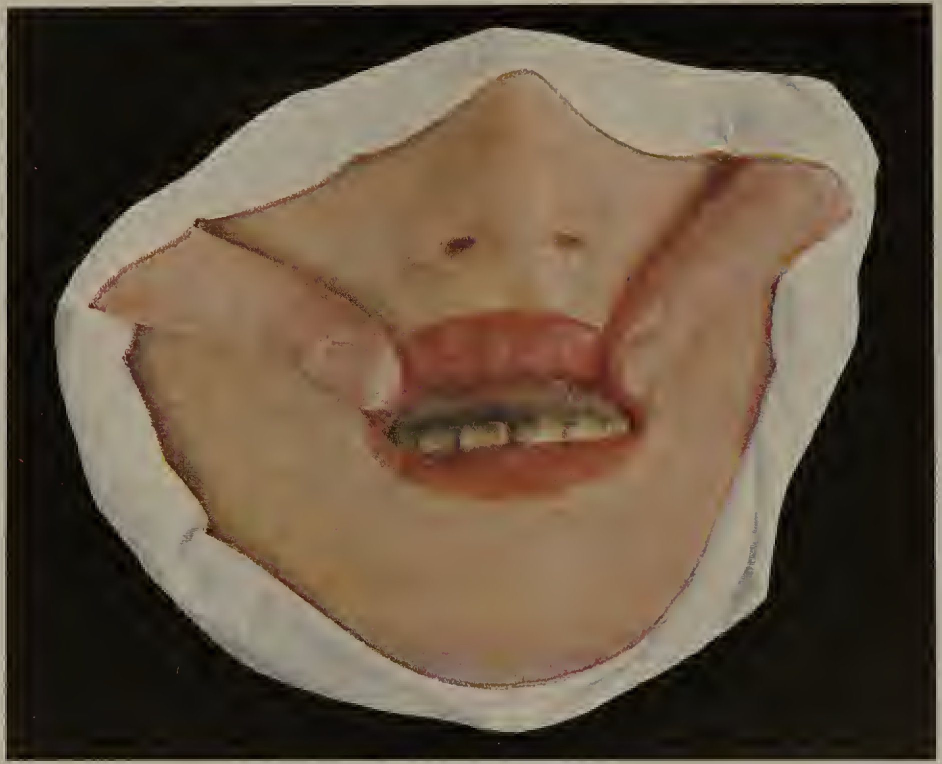


Fig. 197. Dyschromia gingivae saturnina

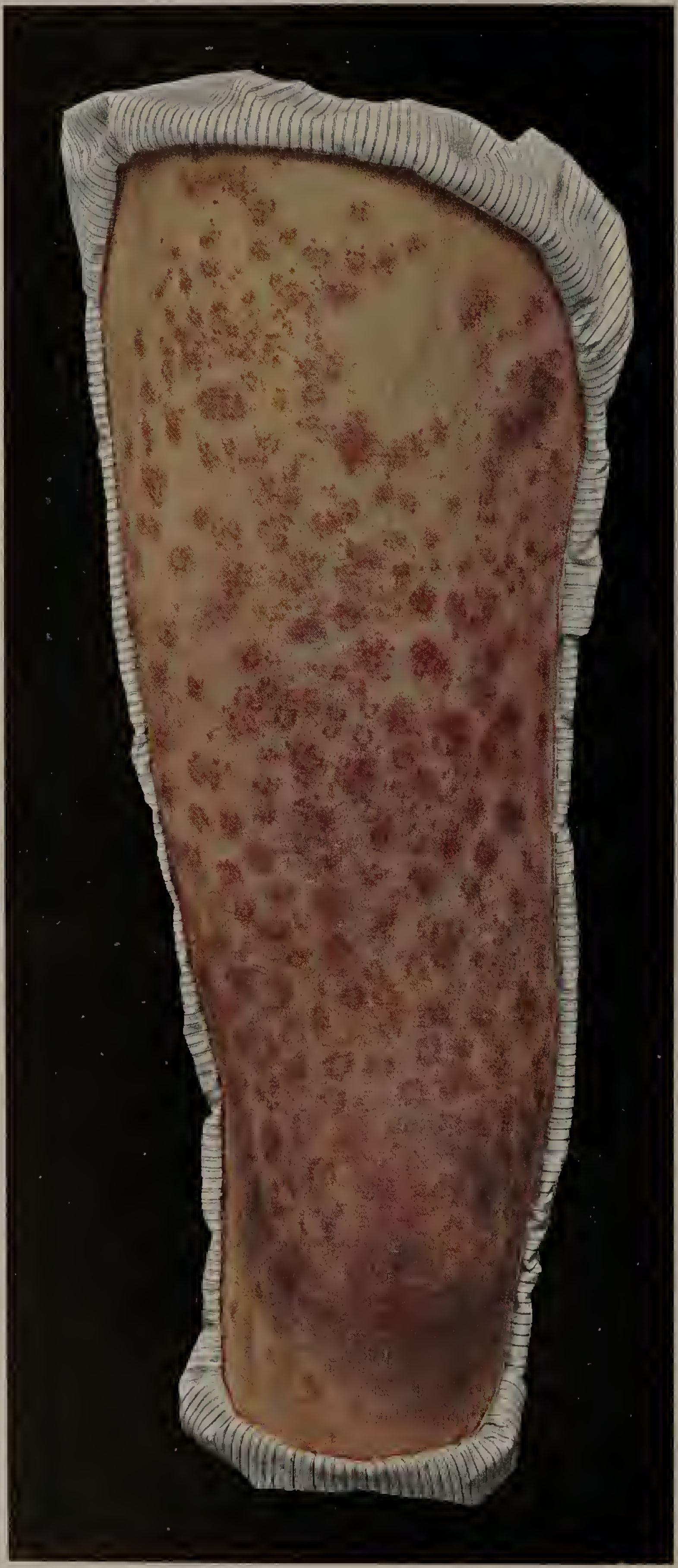


Fig. 198. Toxicodermia ex usu balsami Copaivae

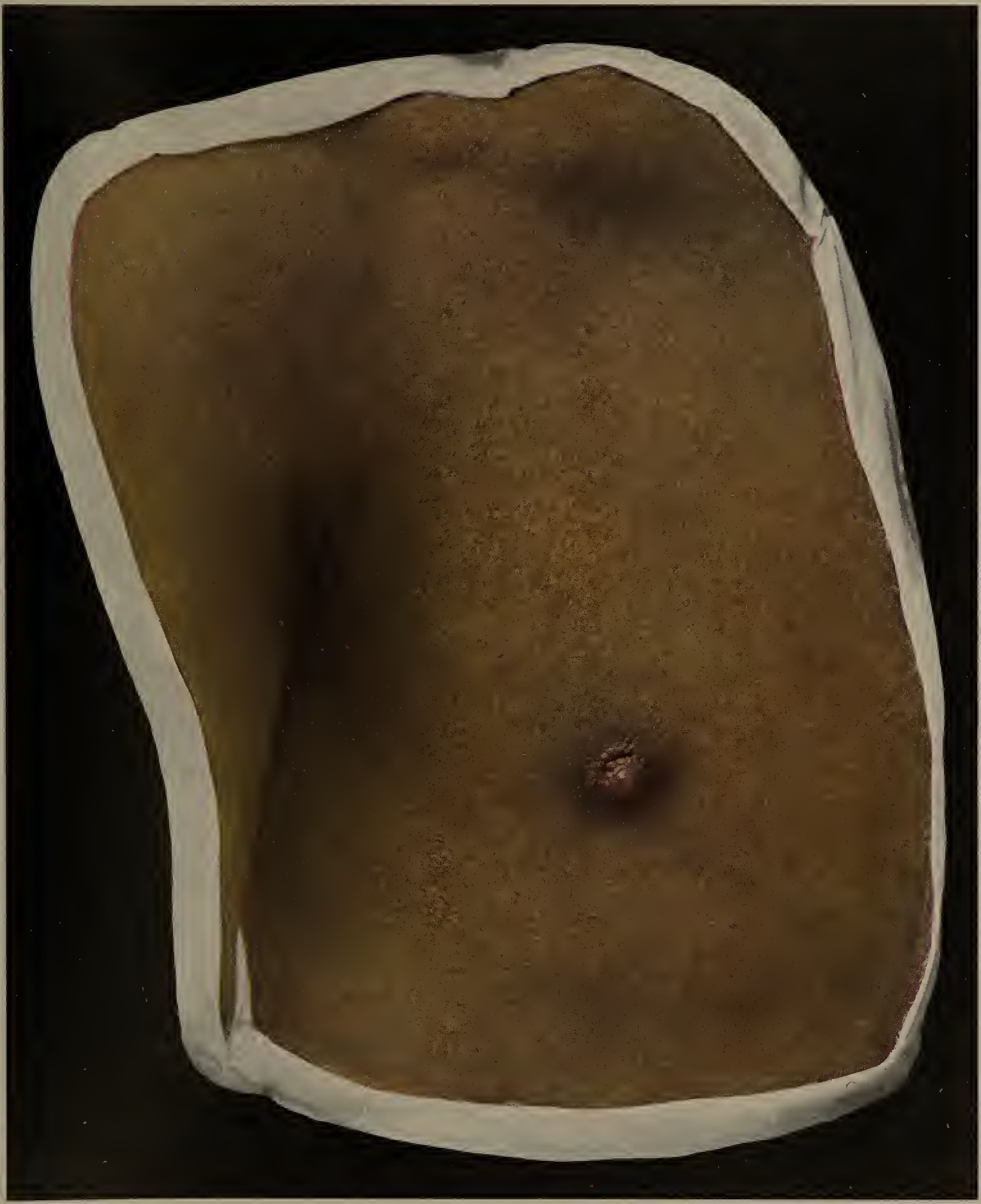


Fig. 199. Toxicodermia ex usu Arsenii (Melanosis)

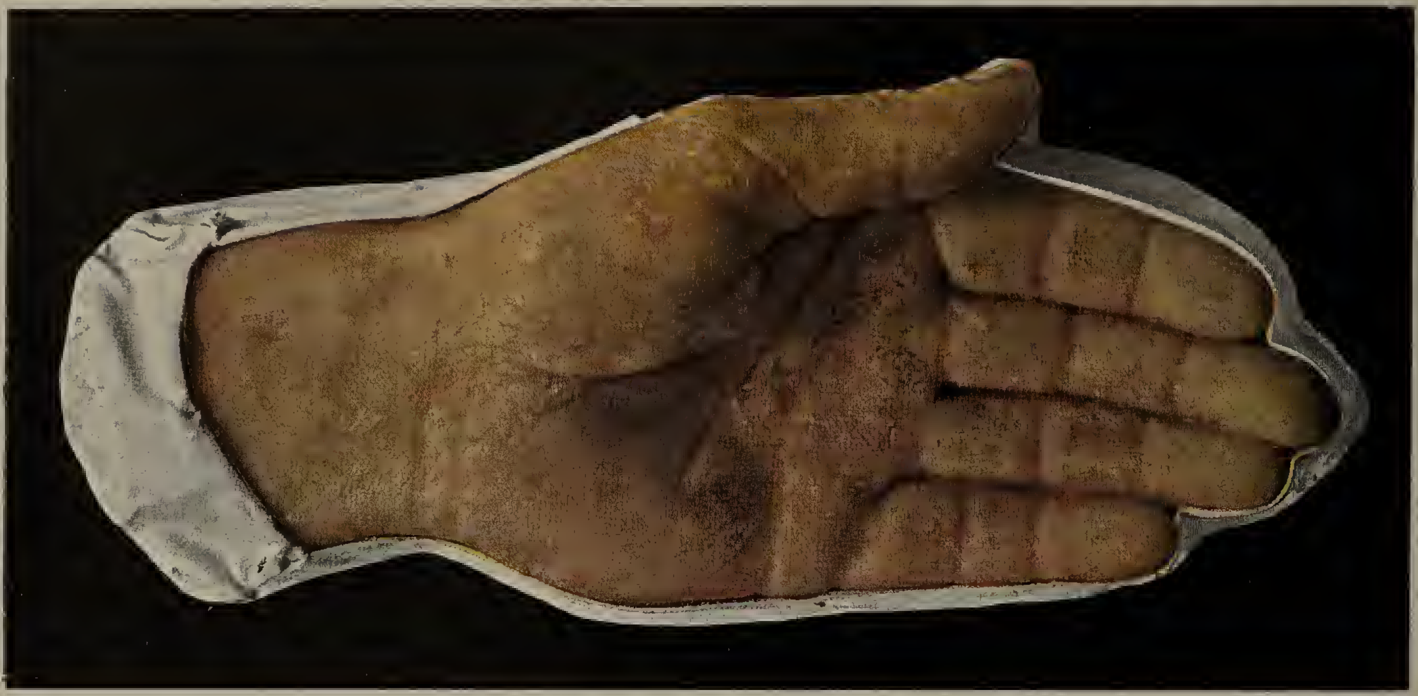


Fig. 200. Toxicodermia ex usu Arsenii (Hyperkeratosis)

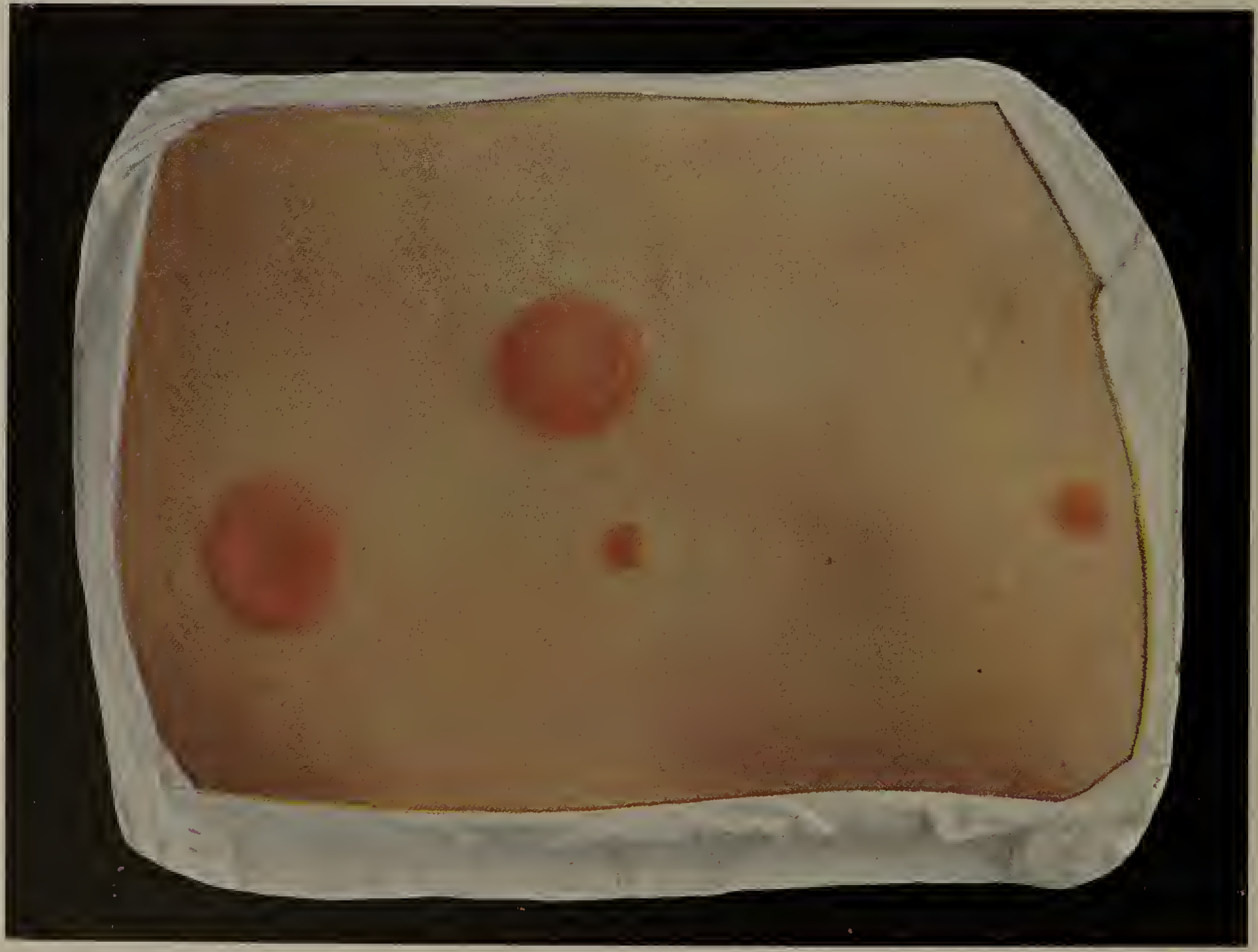


Fig. 201. Toxicodermia ex usu Antipyrini

Arsenic (Plates 108 and 109, Figs. 199 and 200)

After long-continued administration of arsenic the skin over the trunk is liable to become pigmented, either as a diffuse melanosis (Fig. 199) or in the form of numerous pigmentary spots which tend to run together in a reticular arrangement. The eruption varies in colour from gray to dark brown or even black; the regions normally pigmented are usually especially affected.

In arsenical keratosis (Fig. 200) affecting the palms and soles the horny layer becomes markedly thickened, and little plugs develop which, if removed, disclose small pits. The surface is generally roughened and dirty, and hyperidrosis may be marked in the earlier stages.

Pigmentation and hyperkeratosis do not follow salvarsan or neosalvarsan, but these drugs may give rise to scarlatiniform or morbilliform rashes, to urticaria, or in rare cases to a generalised exfoliative dermatitis.

Antipyrine (Plate 109, Fig. 201)

Besides the common erythematous eruptions, a very characteristic rash is occasionally met with, composed of well-defined red patches of a round, oval or irregular form. On fading, these patches leave behind a pigmented area, upon which the eruption is renewed if the drug is again taken. These features are generally sufficiently marked to indicate the nature of the condition and the causal agent.

Dermatitis Artefacta (Plate 110, Fig. 202)

Self-inflicted lesions of the skin are not very uncommon, and may be produced by malingerers with the object of avoiding some duty, or by others in an attempt to obtain some benefit by fraud. The dermatologist is more concerned with the self-inflicted eruptions occurring in hysterical subjects, where, in contrast to the above, no motive for the action can be discovered and where the act may result in material loss and even permanent disfigurement. This class is almost exclusively drawn from among young unmarried women or girls, in whom other manifestations of hysteria may be detected, such as glove and stocking anæsthesia, hemi-anæsthesia, or an insensitive condition or even complete anæsthesia of the palate. These self-inflicted eruptions may be produced by a great many different agents, and therefore differ considerably in their appearance and form. They are confined to regions within reach of the hands, such as the face and abdomen; or in right-handed individuals, to the left side of the body, sometimes the left forearm. The methods employed include friction by the finger with saliva or urine, when superficial ulcers or excoriations are produced, sometimes in parallel lines, sometimes assuming the most fantastic patterns. Deeper lesions may be caused by carbolic, acetic, or other acids, by caustics, or by mustard plasters, when the abrupt or rectangular edge proclaims the artificial nature of the eruption. Mechanical injuries by the nails, by burning, or by various instruments, account for a certain number.

The *diagnosis* in the hysterical cases is made by the age and sex of the patient, and by the unusual and peculiar form of the eruption. It is only on the rarest occasions that these individuals are detected in the act; if questioned, they deny the charge even when the causal agent has been discovered in their possession. Pernet has suggested a state of double personality to account for this phenomenon. Confirmation of the diagnosis can be obtained, in hospital practice, by admitting the patient to a ward and using occlusive dressings, when the lesions will rapidly heal.

Considerable tact and patience are necessary in dealing with these patients and their relations. Some recover completely, others develop other manifestations of hysteria and a few ultimately become insane.

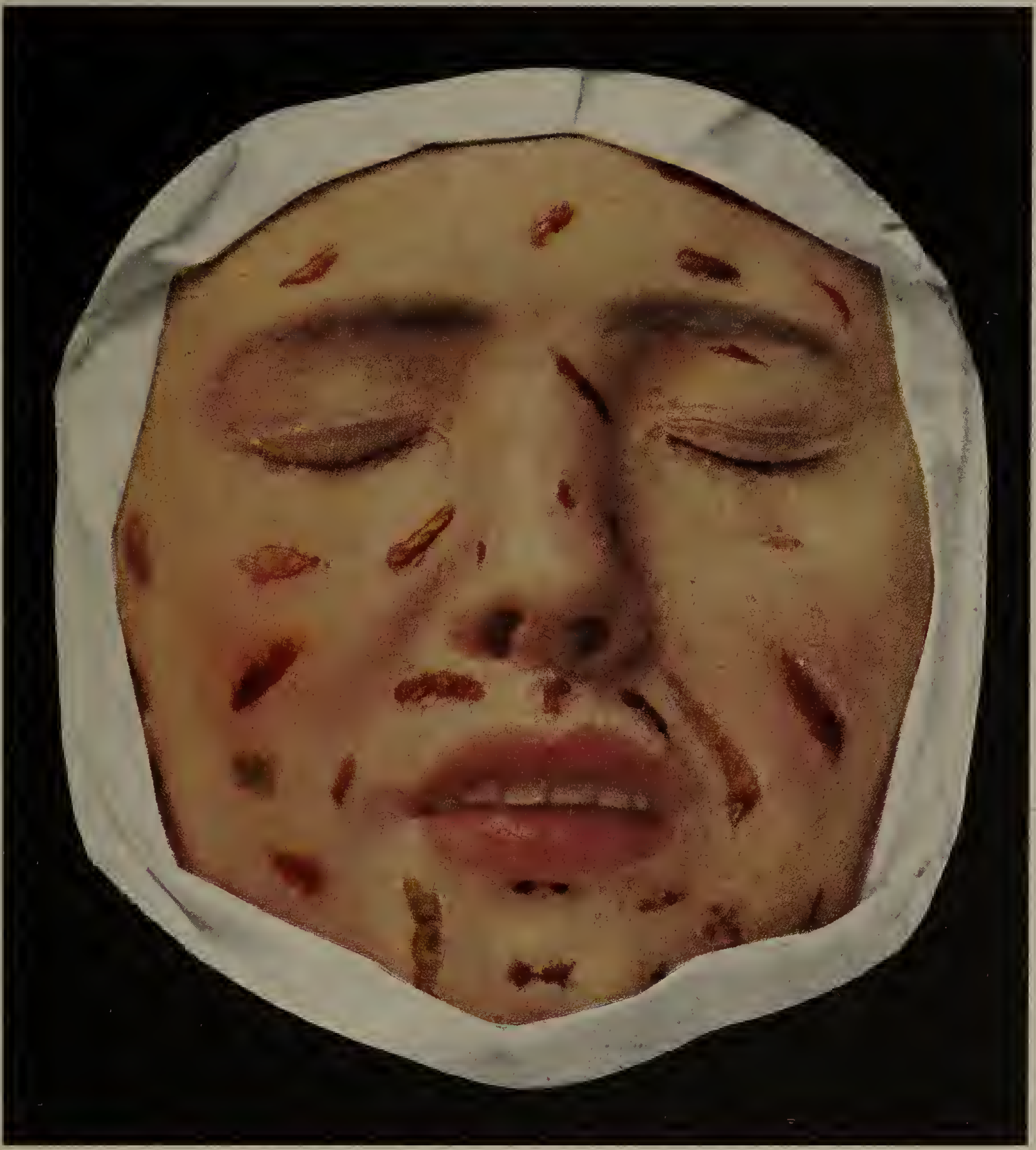
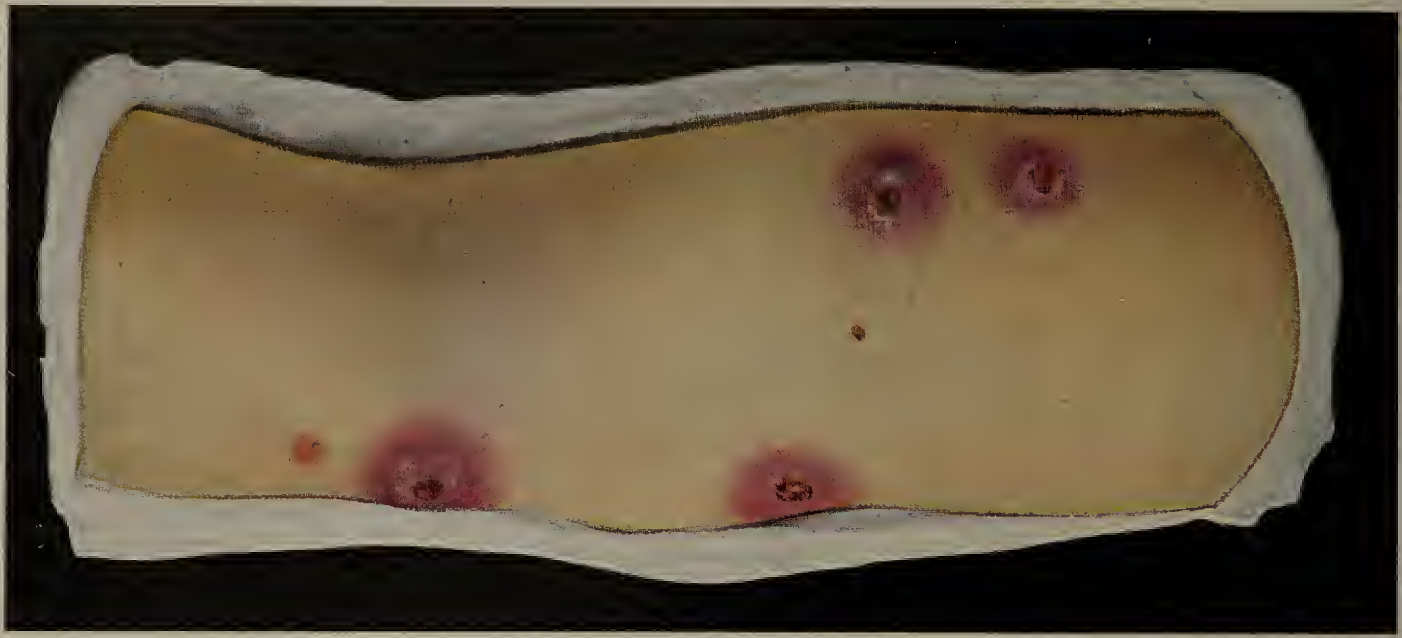


Fig. 202. Ulcerationes acteficiales (e hysteria)



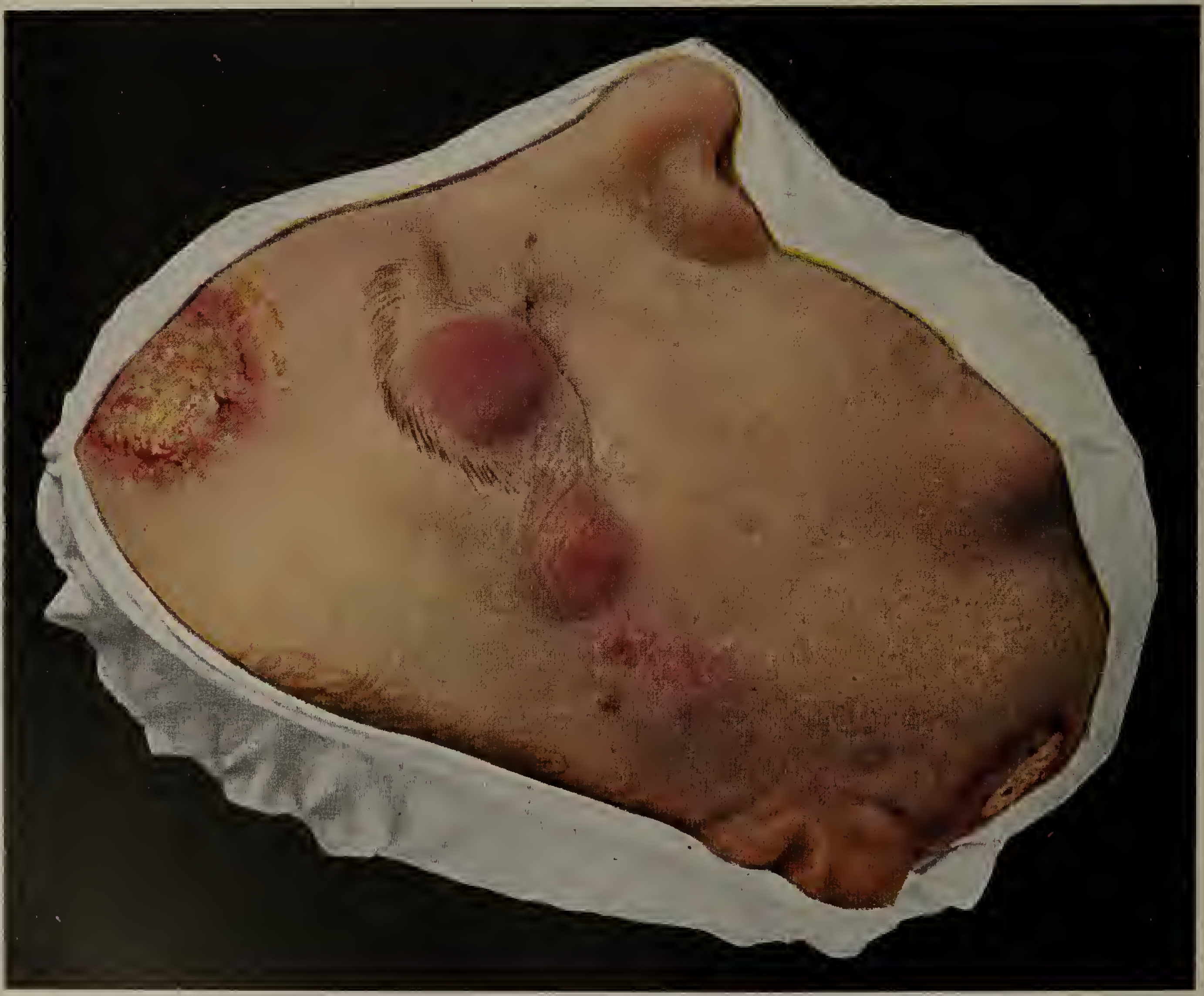


Fig. 203 and 204. Sporotrichosis

Group of Rare Parasitic Affections

Sporotrichosis (Plates 111 and 112, Figs. 203 to 206)

Although sporotrichosis was described by Schenk so long ago as 1898, very few examples of this disease have been recognised in Great Britain. The fungus is not peculiar to man, for it has been found on vegetables, on flies and caterpillars, and affecting domestic animals, such as the mule and dog. When grown on Sabouraud's culture medium, at room temperature, colonies appear about the fifth day as small white points which develop into brown convoluted masses. Films show the growth to be composed of long filaments with numerous spores.

Symptoms

The eruption is polymorphous, and resembles forms of both syphilis and tuberculosis. The earlier American cases began with an infection of a finger, followed by chronic lymphangitis and chronic abscesses along the arm. The gummatous type described by De Beurmann is perhaps the most characteristic. In this form nodules and subcutaneous and cutaneous abscesses, from a pea to an orange in size, develop on different parts of the body (Fig. 203). Some of these discharge their contents (Fig. 204), others persist as cold abscesses. The verrucose or warty forms may result from these changes, or may develop as an independent lesion (Fig. 205). The resemblance to tuberculosis verrucosa cutis is very close. Besides the skin, the bones, periosteum and viscera may be involved, and in rare cases the mucous membranes, especially the larynx and pharynx, without, however, the destructive changes seen in syphilis.

Diagnosis

Sporotrichosis is apt to be confused with both tuberculosis and syphilis, from which it differs in its essential features. Where sporotrichosis is suspected the diagnosis can be confirmed by cultivating the fungus on Sabouraud's medium. Other laboratory methods, such as the complement fixation test, or agglutination of the organism with the patient's serum, may also be carried out.

Treatment

Treatment consists in the administration of potassium iodide in large doses, which usually influences the disease rapidly.

Actinomycosis Cutis (Plate 113, Fig. 207)

Actinomycosis is due to infection with one of the streptotricheæ, of which *Actinomyces bovis* is the best known. The fungus may invade the skin of the face or neck through a carious tooth, or in other situations, although this is extremely rare, directly through some cut or abrasion. Infection of the appendix is very uncommon, but may occur and by extension give rise to secondary disease of the abdominal wall. Secondary infection of the skin may also take place in actinomycosis of the lungs and spine. In some cases the disease has been transmitted to man from horses or cattle, and in others it has been traced to the habit of chewing straw or hay containing the parasite.

Actinomycosis cutis is observed about the jaw and neck in two-thirds of the cases; the lesions consist of red or dark-coloured indurated nodules, which, after a time, break down and discharge their purulent or blood-stained contents through multiple fistulous openings. Enlargement of the glands does not occur. In the discharge the well-known sulphur-yellow granules are often, but not invariably, present; these granules are the size of a pin's head, and are not unlike small beads of pus, with which they are sometimes confused. The disease is diagnosed by its chronic course, its situation, and by the presence of the nodular eruption from which, through the fistulæ, the yellow bodies are discharged. Genuine primary actinomycosis of the skin is very rare, the fungus as a rule reaching the integument by extension from some underlying deeper structure. The clinical diagnosis should be confirmed by a bacteriological examination; if the yellow granules, alluded to above, are present, this is an easy matter, for they are composed of masses of the fungus. In other cases occasional long, branching, mycelial threads can be observed in the purulent discharge; or it may even be necessary to cultivate the organism to establish the diagnosis. The condition termed mycetoma or Madura foot, met with in India, Ceylon, and Egypt, where the foot becomes markedly deformed and swollen with numerous fistulous openings, is due to allied fungi.

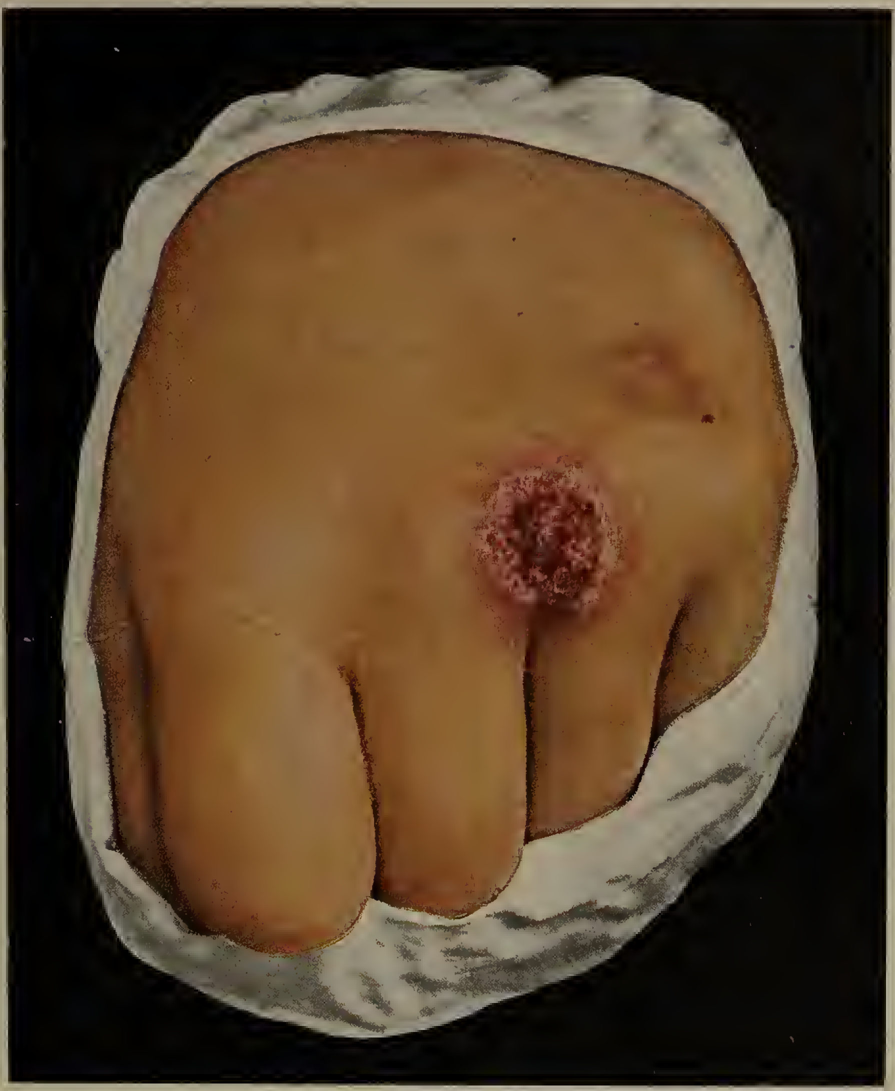


Fig. 205. Sporotrichosis verrucosa

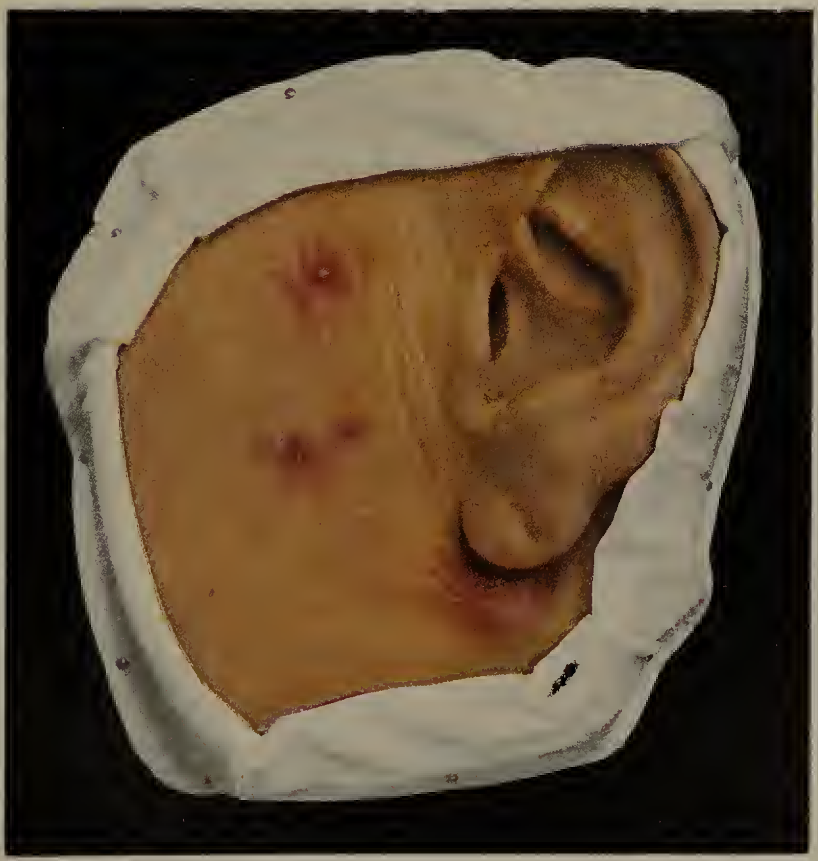


Fig. 206. Sporotrichosis epidermica

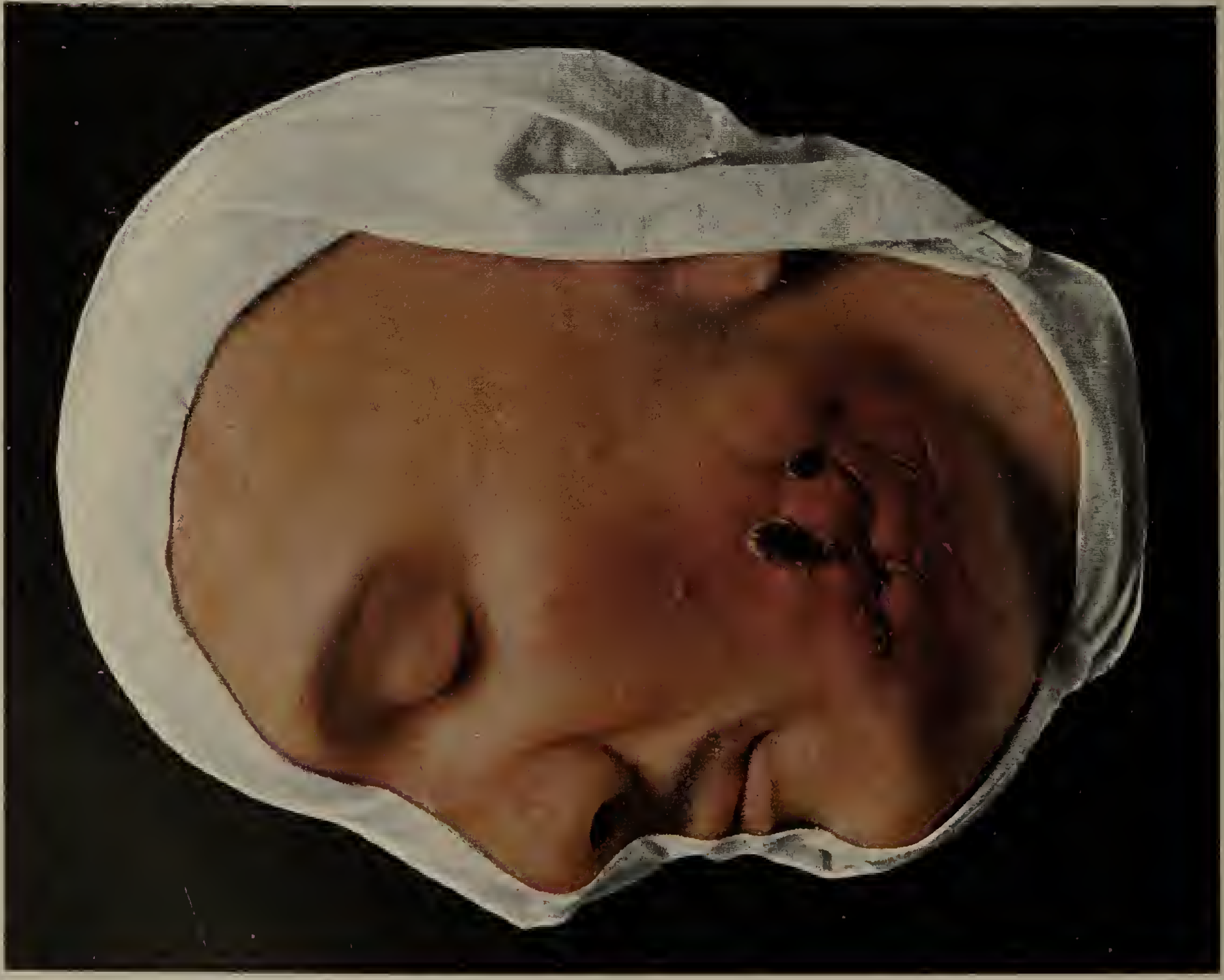


Fig. 207. Actinomycosis cutis

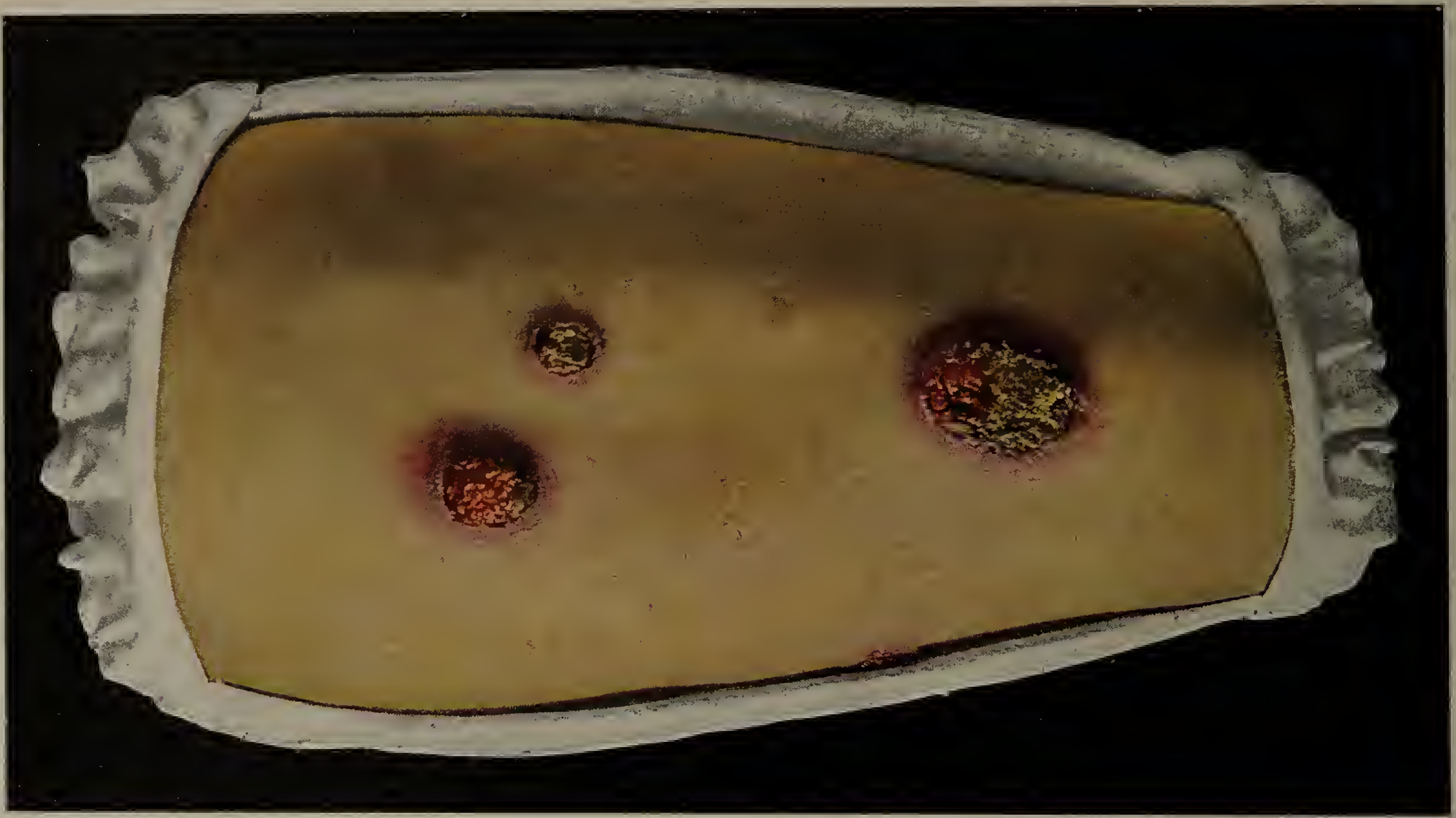


Fig. 208. Leishmaniosis ulcerosa cutis (Oriental sore)

Treatment consists in the administration of iodide of potassium in large doses; the sinuses should also be scraped out, and ordinary surgical methods adopted to remove, as far as possible, the diseased tissue. Some cases appear to be improved by X-rays, which may be given in combination with other forms of treatment.

Leishmaniasis Ulcerosa Cutis (Oriental Sore) (Plate 113, Fig. 208)

Cutaneous Leishmaniasis, a parasitic affection due to the *Leishmania tropica*, has a wide distribution throughout tropical and subtropical regions, and has, in consequence, received a variety of different names, such as Delhi boil, Aleppo boil, chancre du Sahara, and pian-bois (Guiana). After an incubation period varying from a few days to two or more months, a small itchy red papule, which gradually enlarges and becomes converted into a crusted ulcer, appears at the site of inoculation, usually some exposed part of the body. The lesions are not infrequently multiple, and may be present in various stages of development. They are extremely indolent, and often persist in the ulcerated stage for months, leaving a well-marked scar on healing. The microscopic structure corresponds with the appearances seen in a chronic granuloma. The causal parasite, a round or pyriform body containing two chromatic masses in the granular cytoplasms, can be seen in certain large cells, supposed to be proliferated endothelial cells, or it may be demonstrated in scrapings from the lesions by colouring with Leishman's stain, a method used to confirm diagnosis.

Treatment may be carried out by excision, by X-rays, or by cauterising the sores. Low advises an ointment containing 2 per cent. antimonium tartaratum, and this substance has also been administered intravenously with favourable results.

Malleus Chronicus (Plate 114, Fig. 209)

The disease termed glanders, the result of inoculation with a specific bacillus (*B. mallei*), is generally contracted from horses or mules suffering from farcy; or, in laboratory workers, from artificial cultures. In the acute form the affection is rapidly fatal, and is accompanied by marked general symptoms, with abscess formation, and an eruption not unlike smallpox. In the chronic variety, infection may take place through a wound or abrasion on an exposed part of the body; lymphangitis and adenitis, followed by multiple abscesses, result. Sometimes chronic glanders originates in the nasal mucosa; a purulent discharge appears, and the skin over the upper lip and nose subsequently becomes ulcerated, leading to extensive destruction and mutilation (Fig. 209). The chronic phase may persist for months or years, or may terminate abruptly by an acute exacerbation.

Diagnosis

Diagnosis presents many difficulties, and usually depends upon the identification of the causal bacillus by laboratory investigations.

Treatment

Treatment is carried out on general medical and surgical lines, but is rarely successful, the majority of the patients succumbing to the infection.

Rhinoscleroma (Plate 114, Fig. 210)

This peculiar hypertrophic deformity of the nose and upper lip is met with in Southern Russia, Poland, and Austria. The disease is due to the bacillus of Frisch, an organism closely resembling the pneumo-bacillus of Friedländer both in its morphological and its cultural characters. On invading the tissues it gives rise to a dense cellular infiltration of the granuloma type, in which peculiar multinucleated cells (cells of Mikulicz) are found. The specific bacillus is present in abundance in the lesions, and can be easily demonstrated in films made directly from their surface. The earliest manifestations consist of indurated reddish nodules which join together to form peculiar, almost stony hard, areas. Most often beginning about the nostrils and upper lip, the disease may involve the palate, larynx, and trachea, producing stenosis with its attendant consequences. The course of the disease is protracted and slowly progressive over years, death resulting from the stenosis of the air passages, or from secondary pulmonary disorders.

Treatment is not very satisfactory, and is best carried out by X-rays, which produce favourable results in some cases.

Pellagra (Plates 115 and 116, Figs. 211 and 212)

Pellagra, also called Lombardian leprosy and erythema endemicum, has been observed in nearly every country and in all climates. The condition has been attributed to the eating of maize, to a protozoon transmitted by a biting fly (Sambon), and to the absence of some essential ingredient in the food. It is generally considered, however, that the true cause still remains to be discovered.

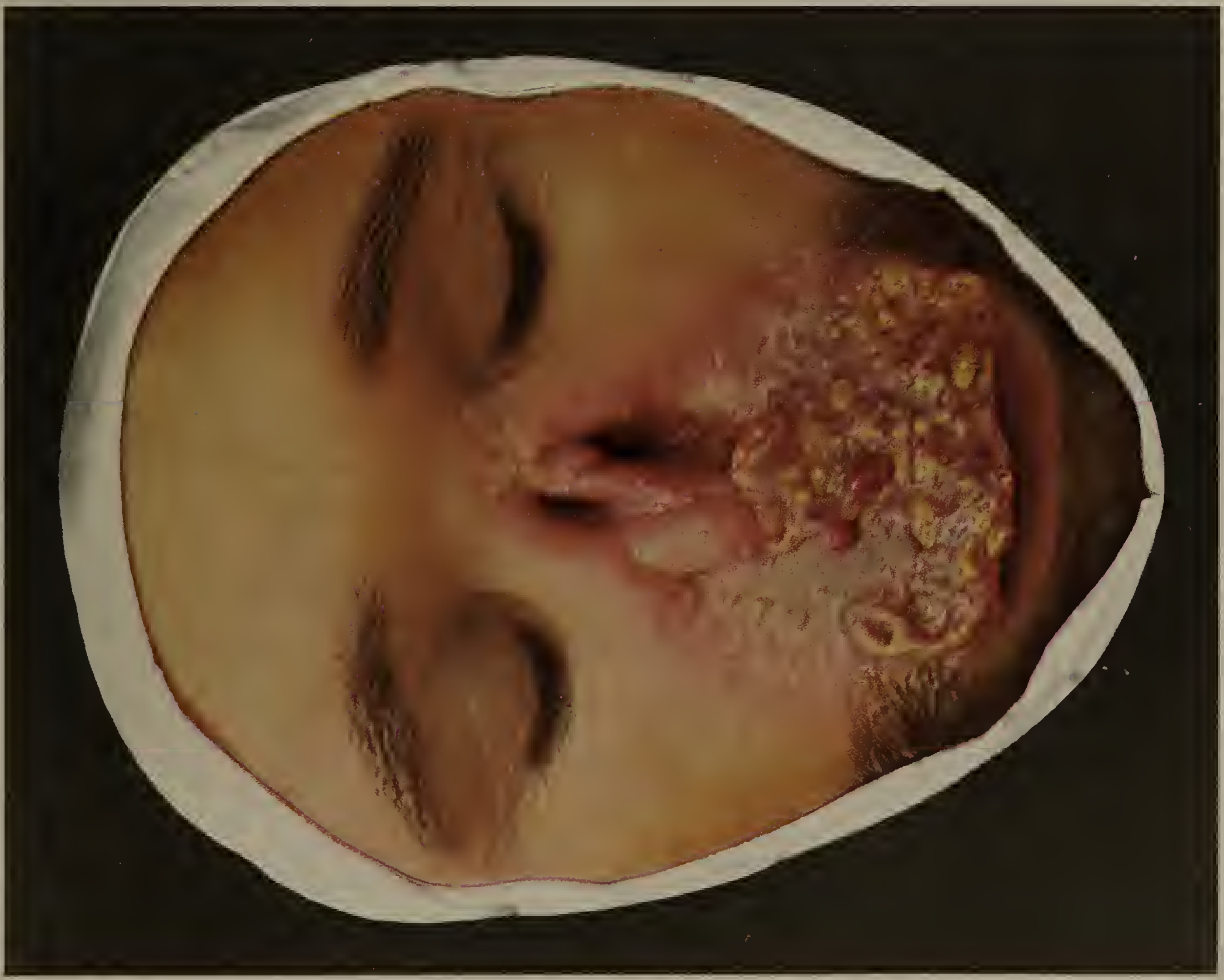


Fig. 209. Malleus chronicus

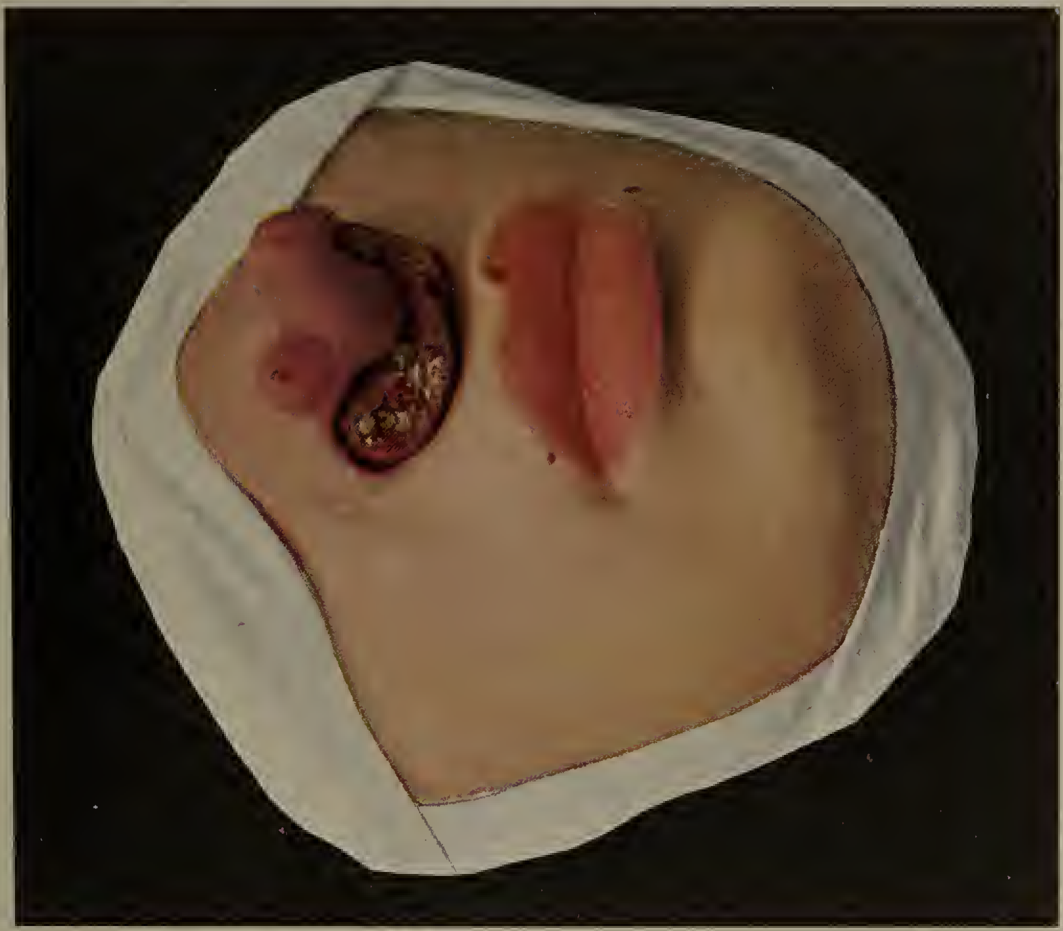


Fig. 210. Rhinoscleroma

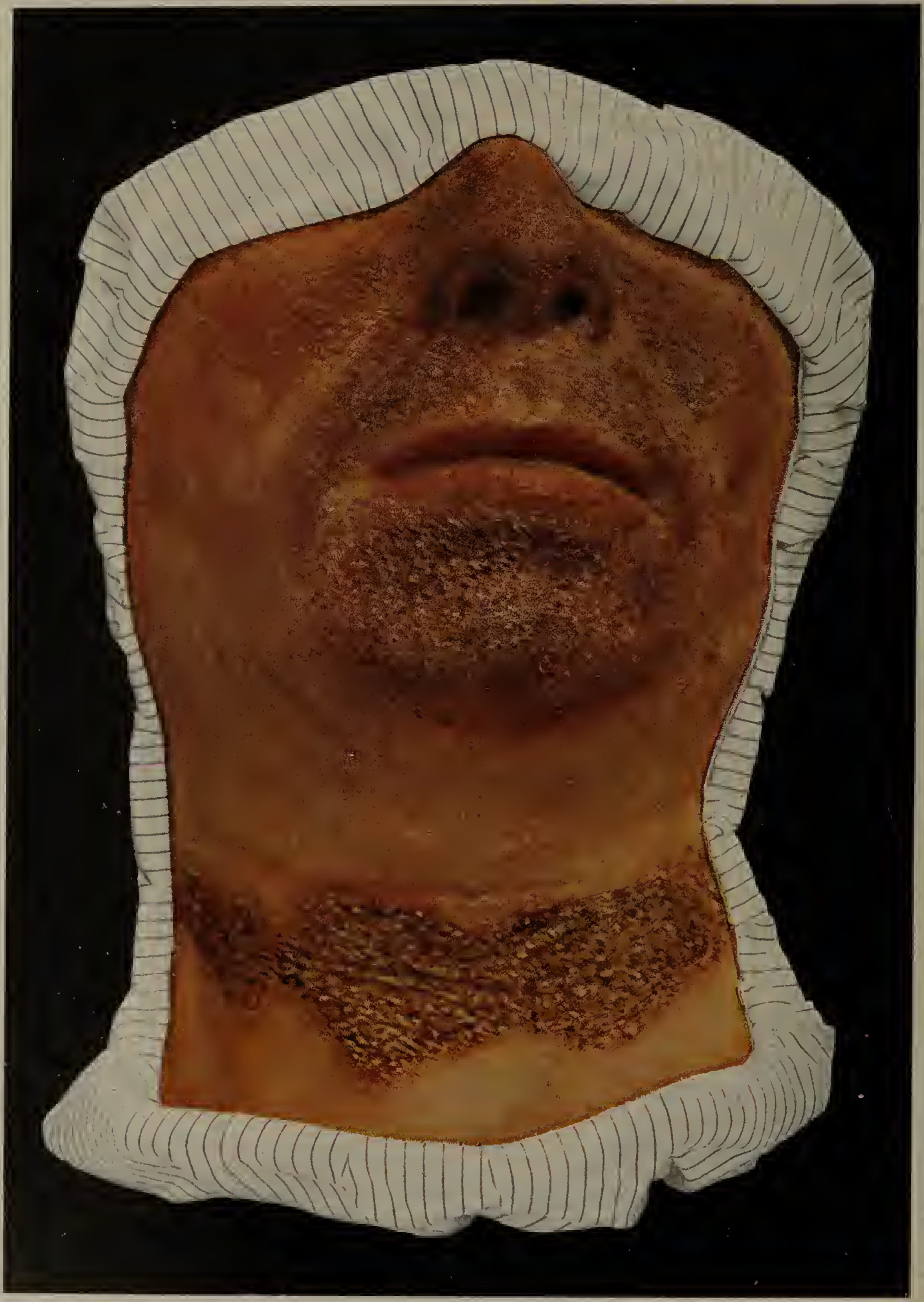


Fig. 211. Pellagra

Symptoms

After an incubation period which, according to Castellani and Chalmers, may be quite short, the first manifestations appear on the skin over the backs of the hands, and, if they are exposed, the dorsa of the feet; the face and neck may also be affected. The condition follows exposure to the sun, usually in the spring, and as it assumes an erythematous form is usually at first attributed to sunburn. Some soreness of the mouth, giddiness and diarrhœa may be observed at the same time. The eruption fades and desquamates, and is replaced by areas of pigmentation. No further manifestations may occur until the following, or some subsequent year, when the condition reappears, usually in a more pronounced form. The attacks tend to recur regularly every spring or autumn, the affected skin eventually becoming permanently altered, thickened, pigmented, or in places atrophied. The disease, unless treated, is steadily progressive, although the patient may seem to recover during the winter months. A band of dermatitis on the neck is sometimes called Casal's necklace, after Gaspar Casal, who first described the disease in 1735 (Fig. 211). The gastro-intestinal symptoms accompanying the eruption include diarrhœa, which may be dysenteric, or constipation, gastric pain, and dyspepsia. Changes in the buccal mucosa are common, such as redness, vesiculation, and ulceration; pronounced salivation may occur, and the gums may become swollen and spongy. The nervous manifestations include muscular weakness and tremors; the knee-jerks may be abolished or, in other cases, exaggerated, with ankle clonus. Attacks of vertigo are commonly observed; the patient usually becomes unstable and emotional, and in the later stages melancholic, maniacal, or demented.

Treatment

All authorities are agreed that it is of the highest importance to remove the patient from the pellagrous area, when, even in moderately severe cases, the prospect of recovery is good. As Castellani and Chalmers have pointed out, it is, nevertheless, well not too readily to assume that cure has been effected, as, even in the apparently cured, relapse may occur after two, five, or more years. The methods of treatment embrace good hygienic conditions, the protection of the skin from the effects of light, and the administration of arsenic. There is no specific for the disease, symptoms as they arise being dealt with on general principles.

Gangræna Diabetica (Plate 116, Fig. 213)

Diabetic gangrene is usually limited to one foot, often one of the toes, but also occurs on the hands or genitalia. The condition may follow slight trauma, or originate in an apparently spontaneous manner, or develop upon some pre-existing dermatosis. The affected region becomes red and inflamed, with bullous formation, followed by sloughing. Sometimes a whole extremity may be involved with comparative rapidity.

Treatment is both local and general, the latter being directed against the causal state.

Plate 116

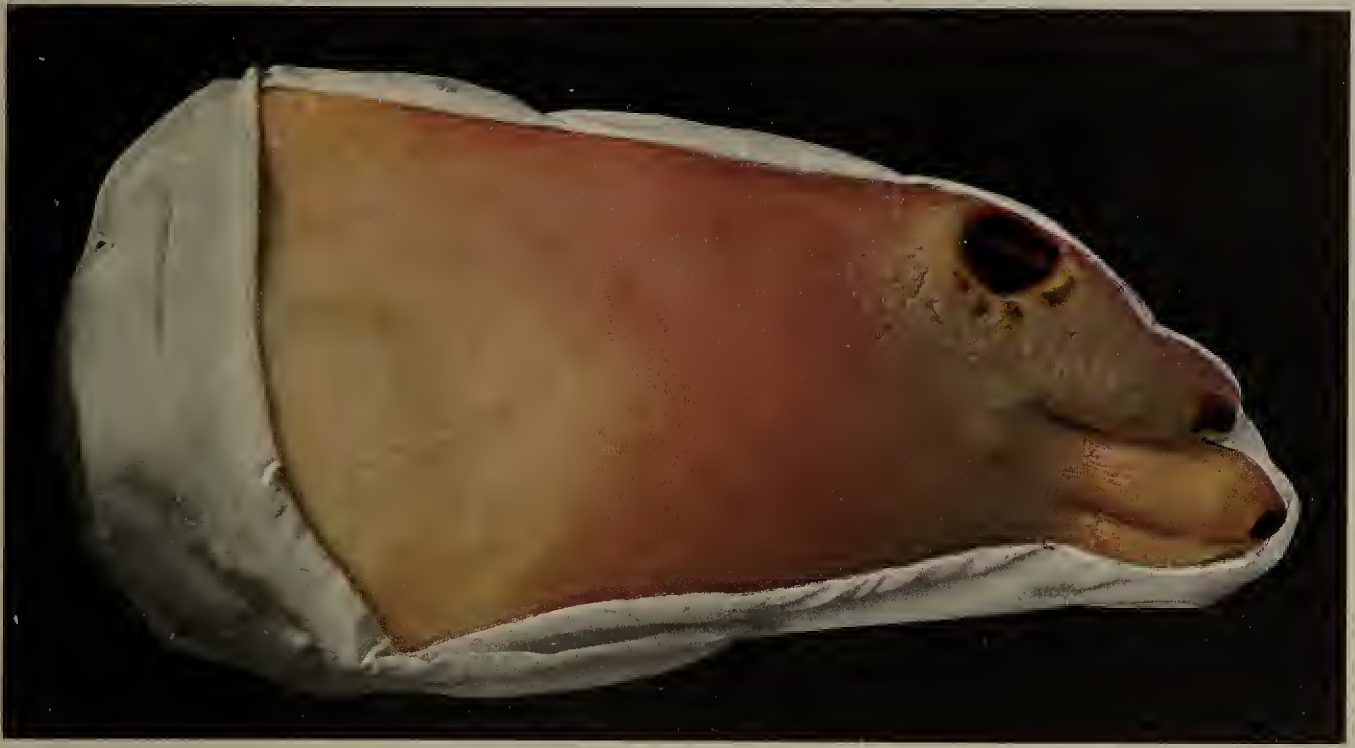


Fig. 213. Gangraena diabetica

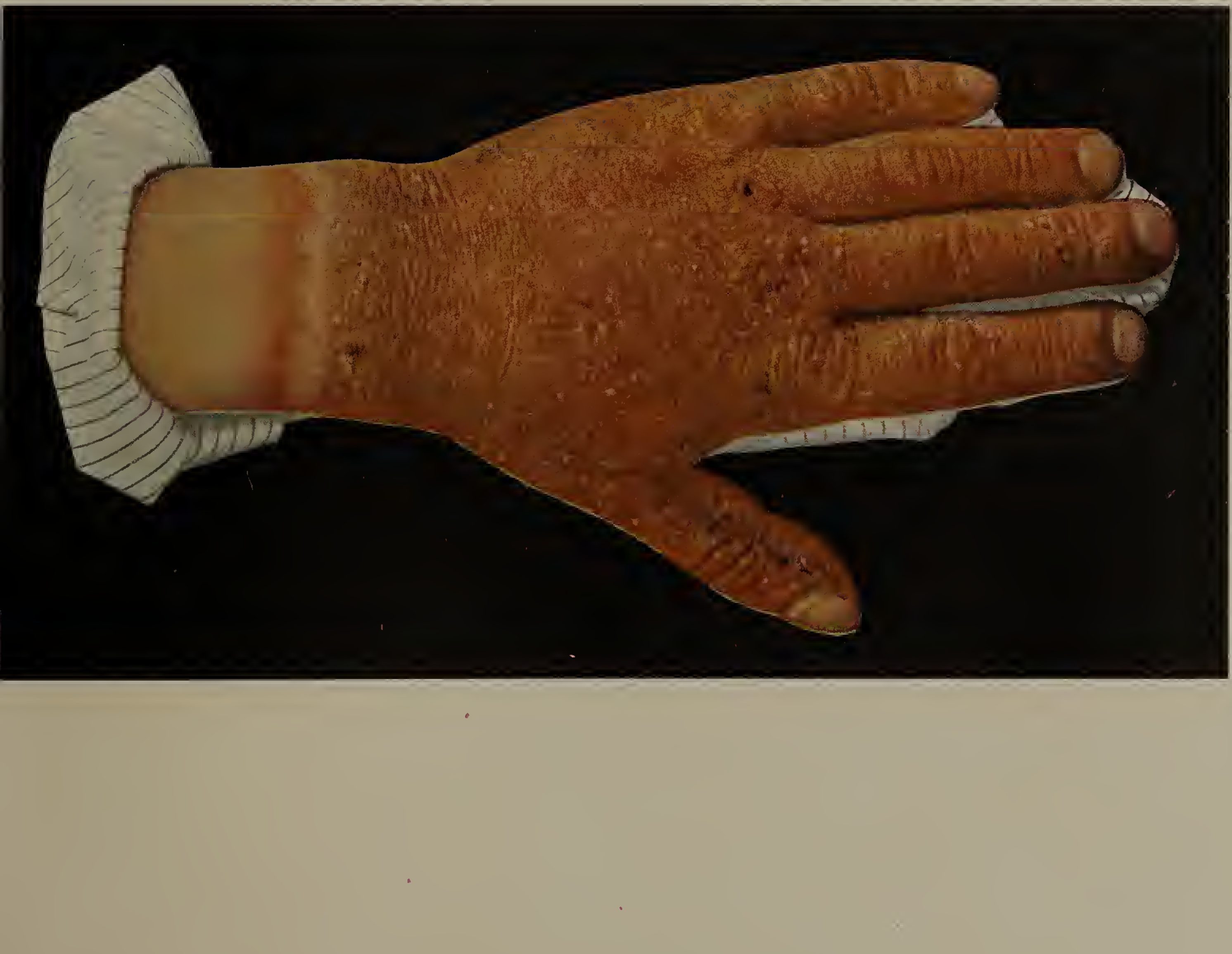


Fig. 212. Pellagra

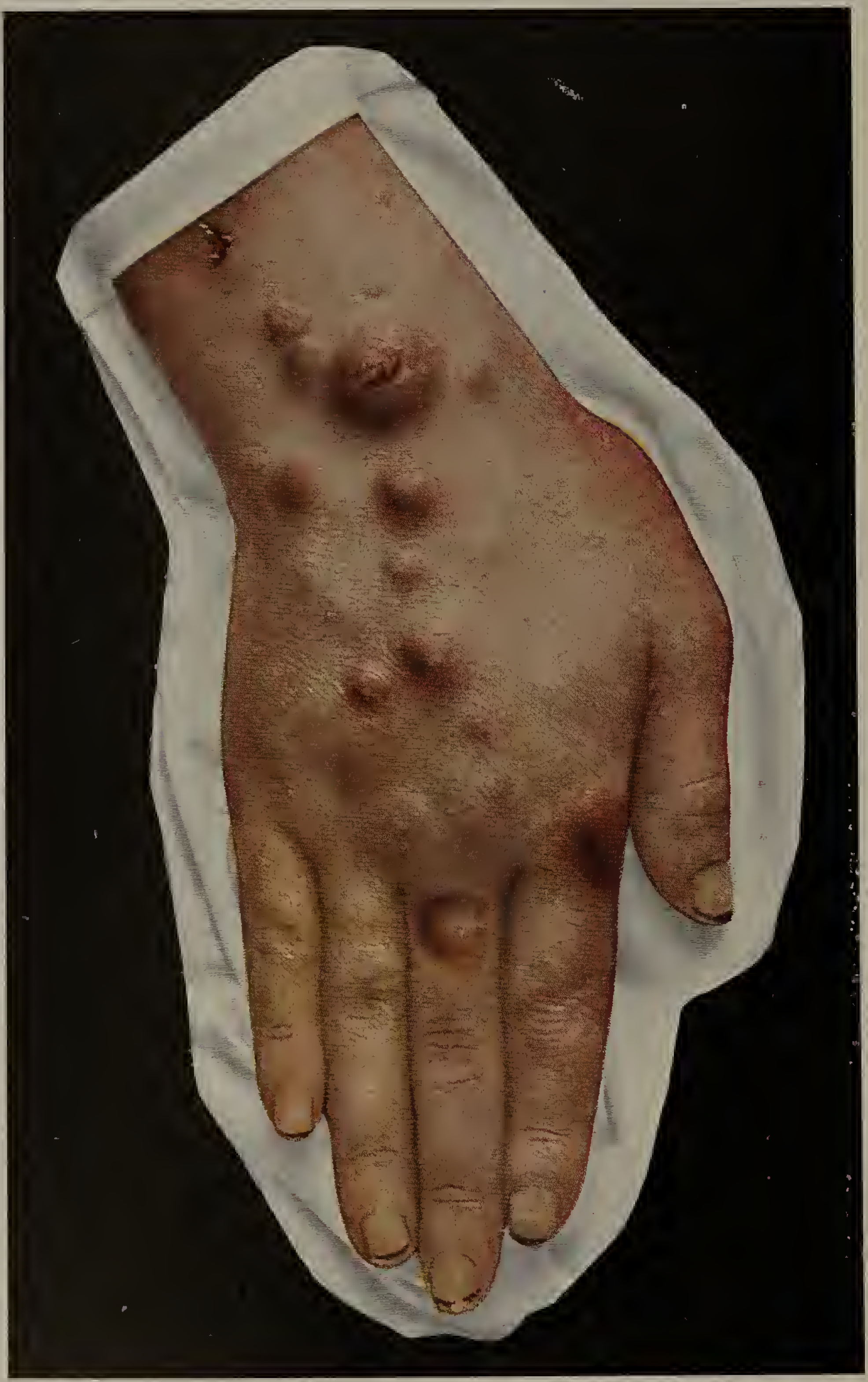


Fig. 214. Lepra tuberosa

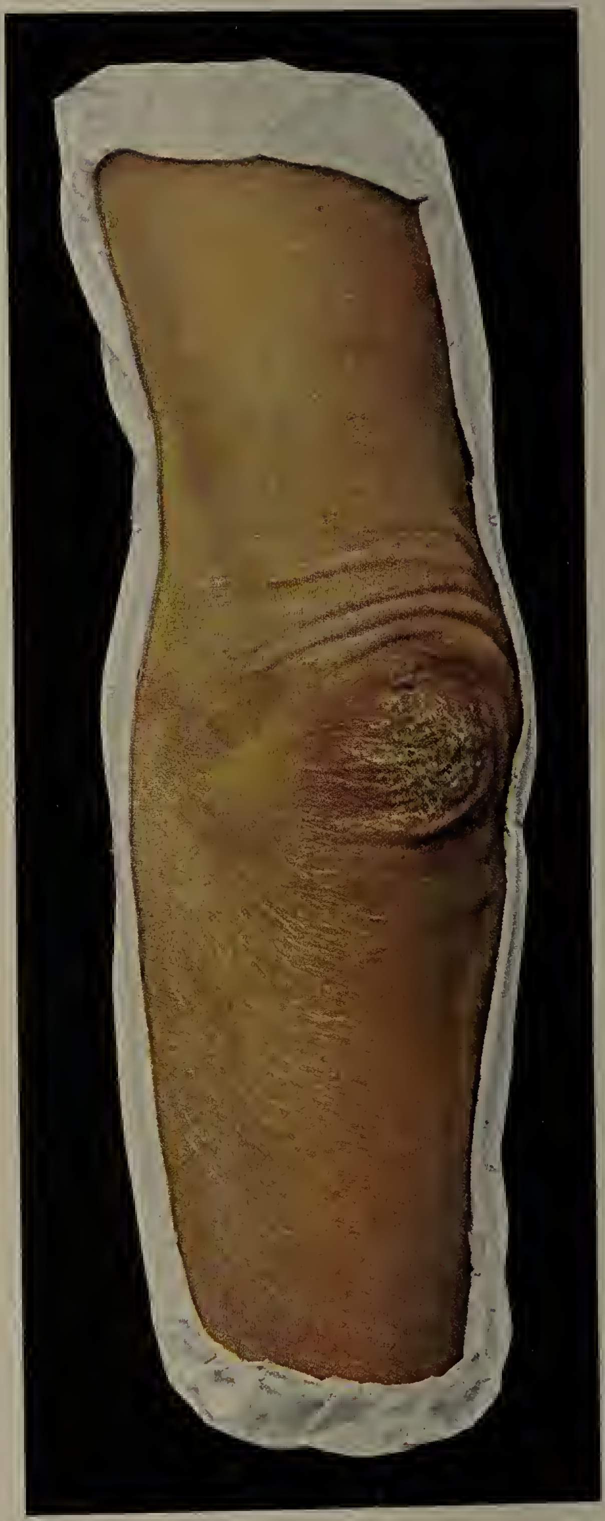


Fig. 215. Lepra tuberosa
(psoriasiformis)

Leprosy

Plates 117 to 120, Figs. 214 to 222

Leprosy may be defined as a chronic infective disease due to an acid-fast bacillus—the bacillus of Hansen—which produces the characteristic lesions in the skin, mucous membranes, nerves and viscera Leprosy is endemic in many parts of the world, and is transmissible from man to man, possibly through some intermediate agency.

Etiology and Pathology

The disease is endemic in India, Ceylon, China and Japan, and also occurs in Central and South America and in the West Indies. It is common in the African continent, but may have been first imported into South Africa about the middle of the eighteenth century (MacLeod). In Australia leprosy is rare, except in certain parts of Queensland among the Chinese immigrants and, to a lesser degree, in New South Wales and Victoria. The disease is not limited to tropical and subtropical climates, for it occurs in certain parts of Europe, such as Iceland, Norway and Sweden, the Baltic provinces, and in Spain and Portugal. Even in France it has not entirely disappeared, and it is still endemic in Turkey and Crete. In Great Britain a number of imported cases are known to exist, and recently, at the Royal Society of Medicine, S. E. Dore exhibited a patient who had contracted the disease in England.

The causal bacillus is a rod-shaped organism, closely resembling the tubercle bacillus in its form and staining reactions. It occurs in the lesions in great abundance, and is present in all varieties of the disease. Many attempts have been made to cultivate it on artificial media, but, although a number of investigators have claimed positive results, it is very doubtful whether the bacillus has ever been grown outside the human body. Inoculation of animals with the morbid tissue has been equally unsuccessful; the so-called rat leprosy, a disease presenting features somewhat similar to human leprosy, and also due to an acid-fast bacillus, is probably of an entirely different nature. Before the discovery of the specific bacillus, food had been regarded with suspicion, especially fish, in the view of Sir Jonathan Hutchinson.

This theory is of considerable antiquity, and White in the " Natural History of Selborne " conjectures that one cause of this distemper might be, no doubt, the quantity of wretched fresh and salt fish consumed by the commonalty at all seasons as well as Lent. This theory is now of no more than historic interest.

The *histopathology* of the lesions is similar in all situations of the body. In the skin, where they can best be studied, the granulomata are found to be composed of infiltrations of round cells, with lymphocytes and mast cells. The acid-fast bacilli are present in large numbers, and can easily be demonstrated in appropriately stained sections. Certain large cells (lepra cells) with a vacuolated protoplasm and multiple nuclei are characteristics of the disease.

The *mode of infection* is obscure; the bacillus may gain entrance to the body through the nasal mucosa, through the alimentary canal, through the skin, or in other ways; but of this there is no certain knowledge. Transmission through the intermediate agency of a biting insect, such as the bed-bug, has been suggested, and there is some evidence in favour of this theory. Whatever may be the manner of infection, it is generally held that leprosy is only contagious in a low degree, and that the chance of contracting the disease from infected persons, in countries where leprosy is not endemic, is very slight. Nevertheless, such accidents have happened, as in the Irish case recorded by Benson, and in Dore's case. The incubation period has been differently estimated; according to Rogers and Muir, it varies between five and a half months to four years, and is considerably affected by climate and by the habits and general health of the patient.

Symptoms

The earliest period, or period of invasion, is marked by signs and symptoms, often of a vague or indefinite character, the significance of which may be overlooked. These signs include anæmia, rheumatic pains, feverish attacks, and epistaxis. A certain degree of digestive disturbance may also be noted, with vomiting and diarrhœa. Attacks of local or general sweating are frequently observed. After a certain time the more characteristic features of the disease are developed, and may manifest themselves principally in the skin (nodular leprosy), in the nerves (anæsthetic leprosy), or in both (mixed form).

Lepra Tuberosa (*Nodular Leprosy*).—This form of the disease is more common in Europe. The earliest cutaneous lesions consist of symmetrical erythematous eruptions of various dimensions, occurring especially on the face and extensor surfaces of the body. These may

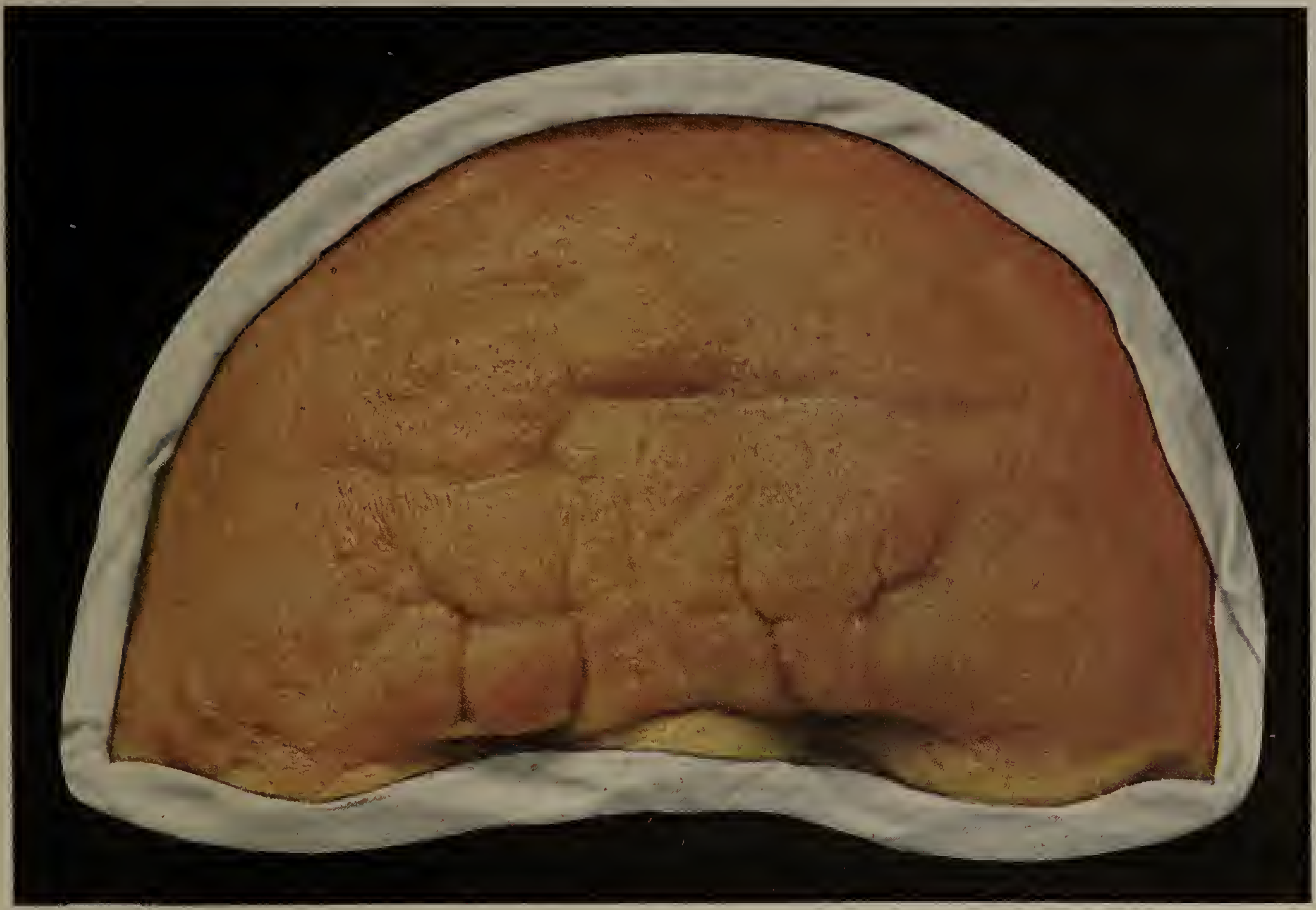
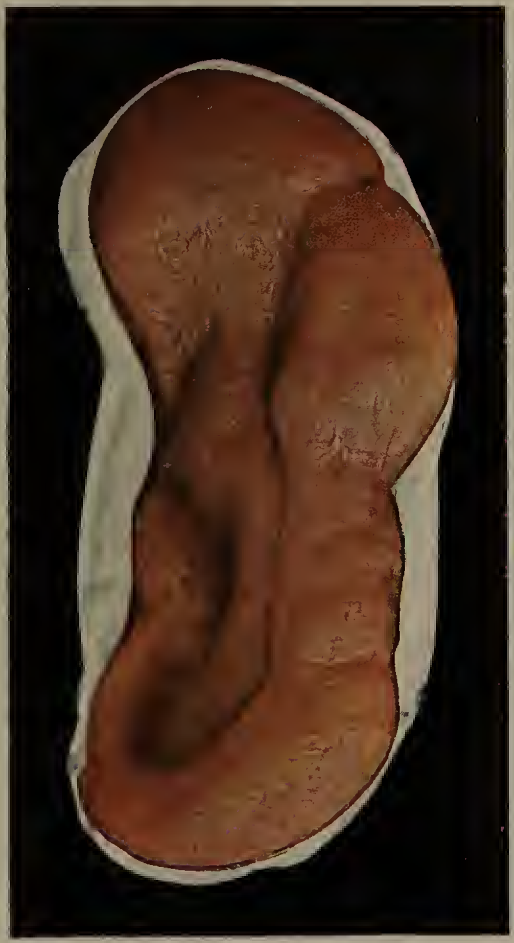


Fig. 216. Lepra tuberosa (Facies leonina)



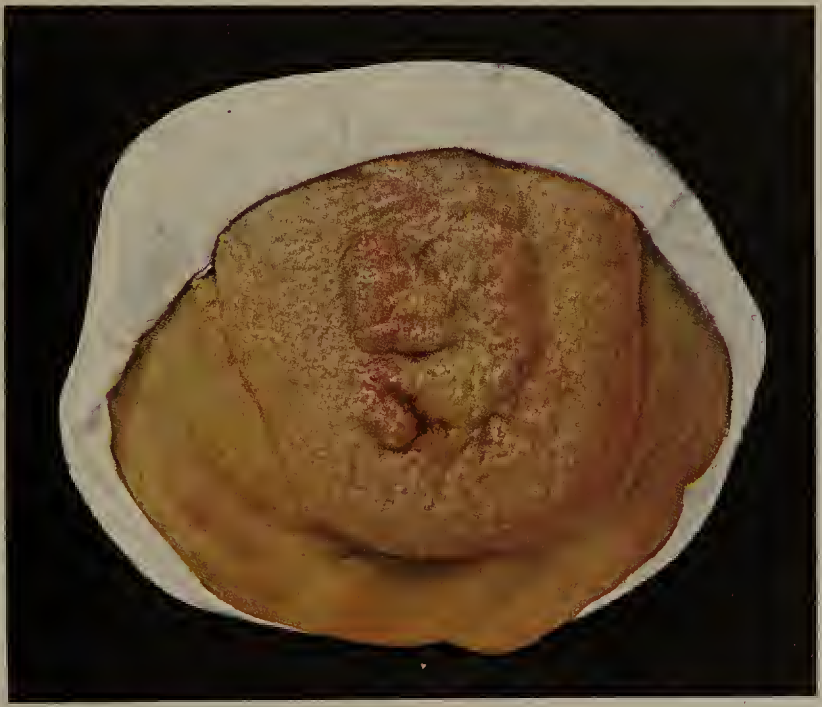


Fig. 217 and 218. Lepra tuberosa

Plate 119

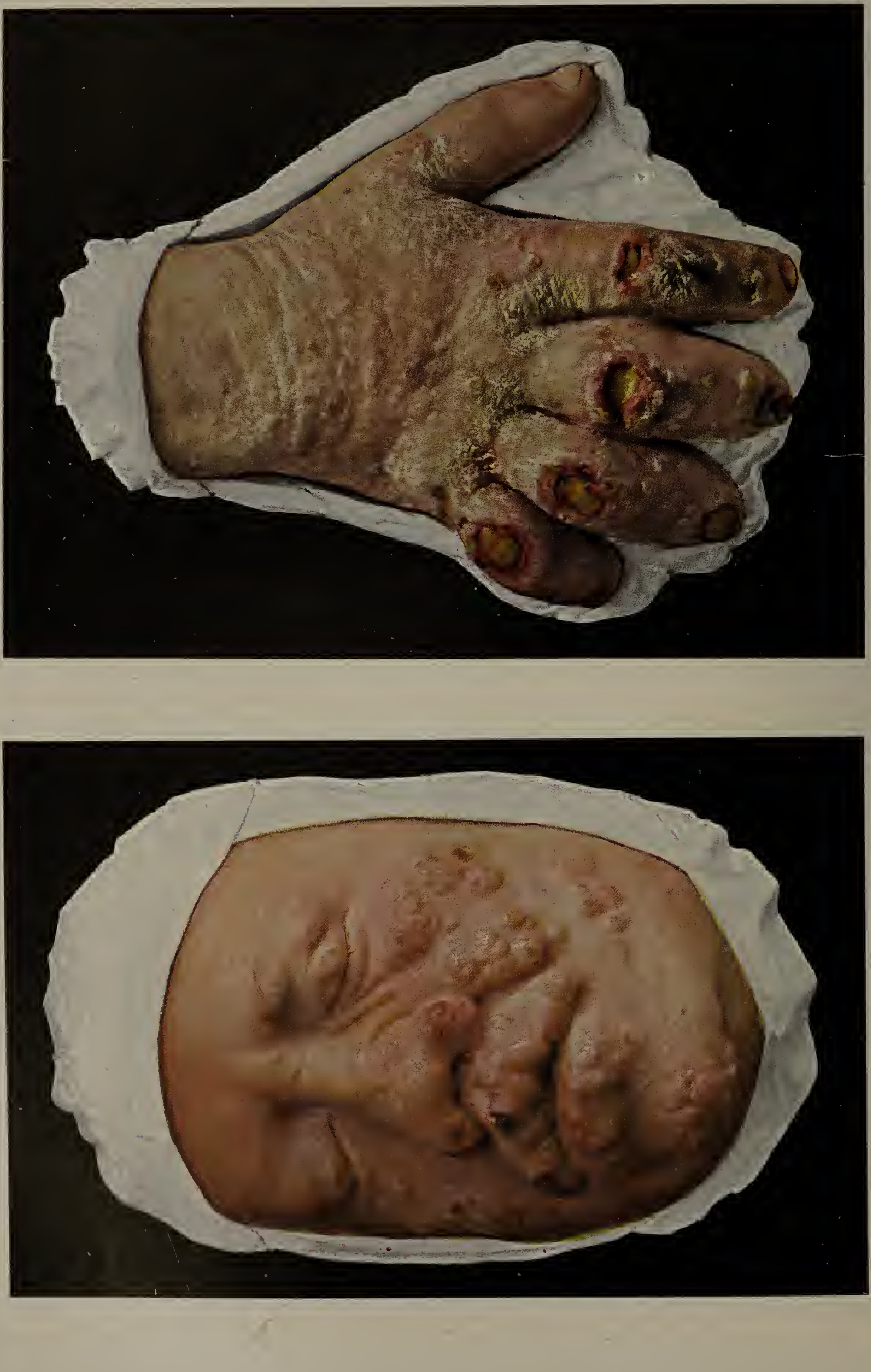


Fig. 219 and 220. Lepra tuberosa

fade, to appear again after an interval. On these patches, or independently, the nodules, characteristic of this form of the disease, develop either as isolated lesions of a reddish-brown colour, varying in size from a pea to a walnut (Fig. 214), or as infiltrated plaques, generally with an irregular or nodular surface. This nodular eruption may affect any part of the body, but shows a special preference for the ears, eyebrows, cheeks, and chin (Fig. 217). The infiltration may produce a special and peculiar disfigurement, the forehead being deformed by massive lesions separated by furrows, the nose thickened, and cheeks and ears similarly affected, a condition termed leontiasis (facies leonina, Fig. 216).

Characteristic changes also occur in the hair and mucous membranes, and the lymphatic glands are enlarged, sometimes to a very pronounced degree. The hair of the face and eyebrows—especially the outer half—tends to fall, and there is a general loss of the hair on the body. In contrast, the hair of the scalp is almost always preserved. The lepromata are of especial frequency in the nasal mucosa, where, by invading the cartilage, they cause considerable destruction and deformity. The larynx is also commonly affected, the voice, in consequence, becoming harsh and croaking. The palate and fauces may be the site of nodules, which, breaking down and cicatrising, occasion obstruction of a greater or lesser degree. Nodules may also be met with on the tongue (Fig. 218). The eyes are frequently involved, small lepromata developing on the conjunctiva or cornea; if the disease spreads to the uveal tract iridocyclitis results.

The course of the disease is chronic, the nodules persisting for considerable periods, sometimes involuting, or, more often, breaking down and forming ulcers (Fig. 220). The appearance of new nodules may be accompanied by a febrile disturbance, the so-called leprotic fever. Remissions are not uncommon, during which all the symptoms may so improve as to mislead the observer to believe the disease has been cured.

Lepra Anæsthetica (*Nerve or Macular Leprosy*).—This variety of the disease is more commonly met with in the tropics—that is, in those regions where leprosy has long been endemic. There is an invasion of the nerves with consequent disturbances of sensation, such as hyperæsthesia, numbness, neuralgic pains or perversion of sensation. The earliest cutaneous lesions may assume the form of bullæ, but more commonly pigmentary patches are observed. Their border is at first raised and may be somewhat erythematous; at a later stage the patches flatten down into a pigmented area, the centre of which may become depigmented and white. A certain amount of desquamation is common, the hair falls, and the affected area becomes anæsthetic, a feature of great diagnostic importance. The nerves are thickened, and often exhibit fusiform swellings, and this deformity may be felt in the ulna behind the olecranon process, another important diagnostic sign. The eyes are commonly involved, a partial paralysis of the orbicularis palpebrarum developing, with ectropion. The mouth may also be similarly affected, and the saliva dribbles in consequence. The affection of the peripheral nerves gives rise to the characteristic " leper claw " (Fig. 221), and to perforating ulcers (Fig. 222), or even, in advanced cases, to a rarefying osteitis with loss of the terminal phalanges (lepra mutilans). Anæsthetic leprosy runs a peculiarly chronic course extending over many years, and may reach a stage in which it appears to have become arrested. Some form of intercurrent disease, such as nephritis, or tuberculosis, is not uncommon in the later stages.

Mixed Leprosy is the name given to a combination of the two forms described above. Some cases are of this nature from the beginning, but it is more usual for the disease first to assume the nodular form, lesions characteristic of the anæsthetic type developing later.

Diagnosis

During the period of invasion, while the phenomena are still of an indefinite character, the greatest difficulty will be experienced in arriving at a correct diagnosis. In regions where leprosy is endemic, the association of epistaxis, with bouts of fever, is of special significance. When the characteristic lesions develop, the nature of the complaint should be suspected. Confirmation is obtained by the discovery of the acid-fast bacillus; Rogers and Muir state that the best results are obtained by clipping out a small piece of skin from the margin of a patch, and pressing this down on a clean slide, which is then stained by the Ziehl-Neelsen method. In certain cases positive results can be obtained by examining the juice obtained from a scarified nodule by light scraping or from the nasal secretion by simple swabbing. Leprosy is probably most often mistaken for syphilis, and as a positive Wassermann reaction may be obtained in the former as well as in the latter disease, this test cannot be used to distinguish the one infection from the other. By a remarkably ingenious technique Dr. James Hasson is able to obtain the acid-fast bacilli, even in cases where other methods have failed. He produces a blister by freezing with CO_2 snow in the usual way; in the fluid contents Hansen's bacillus can be demonstrated.

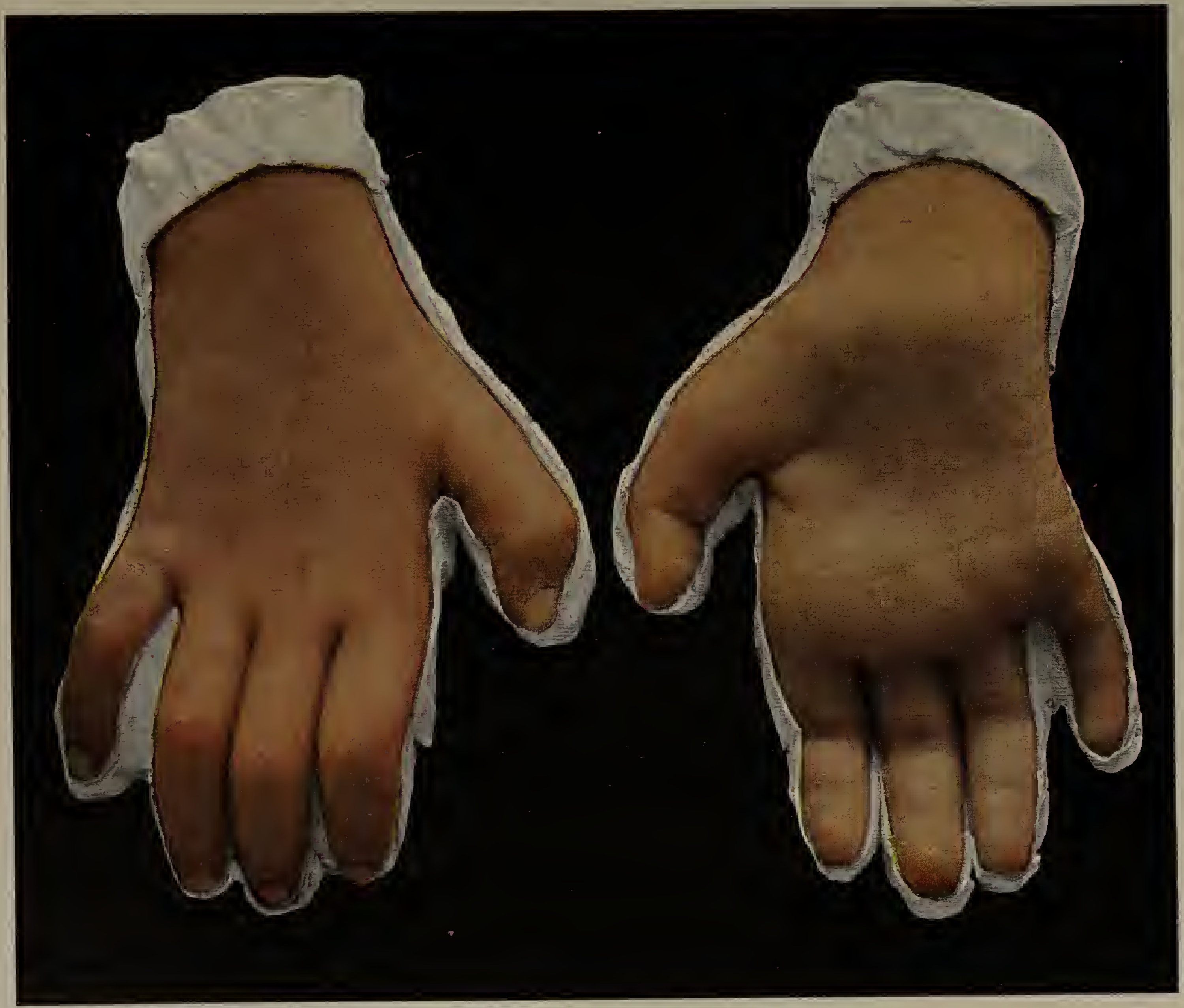


Fig. 221. Lepra anaesthetica

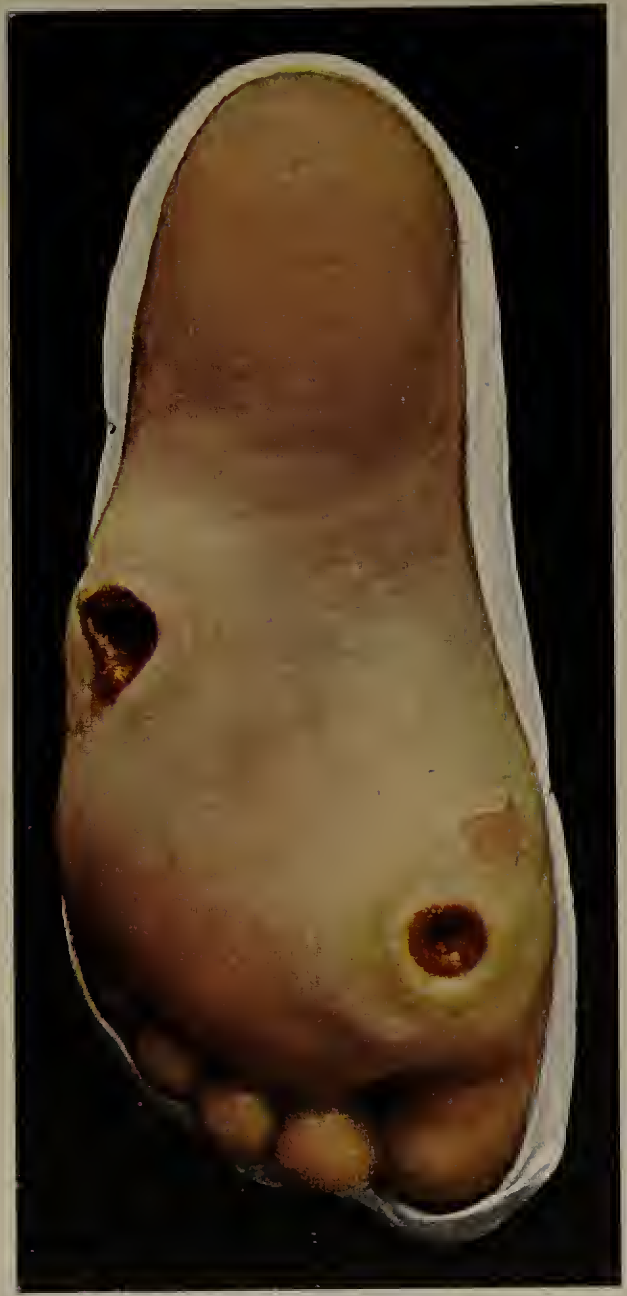


Fig. 222. Lepra; Malum perforans pedis

Treatment

It is not easy to estimate accurately the effect of any remedy in a disease subject to such fluctuations as leprosy, and this, no doubt, accounts for the diverse opinions expressed by leprologists when discussing the various therapeutic measures usually employed. Chaulmoogra oil has a considerable reputation, and may be given by the mouth or injected intramuscularly. When given by the mouth an initial dose of 5 to 10 minims thrice daily is prescribed, gradually increased up to 60 minims, according to the degree of tolerance. Even when administered in capsules, the remedy is apt to upset the digestion, a serious disadvantage. Intramuscular injections may be given according to the formula of Heiser (chaulmoogra oil 60 c.c., camphorated oil 60 c.c., resorcin 4 grammes); the initial dose is 1 c.c., and this is repeated at weekly intervals in an ascending scale (Muir).

Superior results are claimed where the esters of chaulmoogra oil are used, injected either intramuscularly or directly into the nodules. In certain cases intramuscular injections of mercury produce a beneficial effect, as pointed out by Crocker. The method of freezing the lesions with CO_2 snow, suggested by Hasson, has already been referred to. From the blister fluid so obtained, containing Hansen's bacillus, a vaccine may be prepared with which *B. pyocyaneus* is mixed. The general treatment of the leper is as important as the administration of drugs by injection or ingestion. He should be placed in suitable sanitary surroundings, kept clean and comfortable by frequent baths, while any intercurrent affections are carefully tended. The ulcers and the affections of the nose and eyes should be dealt with on general lines; carefully regulated applications of X-rays assist in the resolution of the nodules and in the healing of the chronic ulcers.

The Exanthemata

Diphtheria (Plate 75, Fig. 139; and Plate 121, Figs. 223 and 224)

This is an acute specific infectious fever due to the Klebs-Löffler bacillus, the most typical form of the disease being met with on the fauces. The incubation period is short—about two to five days—after which the characteristic symptoms develop. Infection is conveyed by direct contact or through the medium of towels, clothing, or even milk, and occasionally by carriers. The earliest signs consist of fever of moderate degree, with congestion of the mucous membrane of the throat. White patches soon make their appearance on the tonsils; the uvula and pillars of the fauces may also be involved. The distinctive false membrane soon appears in the form of a gray or white, firmly-attached patch, which is only removed with difficulty, leaving a bleeding surface. The membrane may extend over the fauces and into the larynx. The neighbouring glands are usually enlarged, and albuminuria is not an uncommon feature in the early stages.

In other situations diphtheria is most often the result of secondary contamination. Thus the disease may be met with on the vulva or prepuce or about the anus; wounds may also be infected. A form of cutaneous diphtheria, accompanied by rhinitis, sometimes occurs in the neighbourhood of the nostrils, assuming the appearance of an impetiginised eczema (Fig. 224). A false membrane may form on the affected surface, but this is not an invariable feature.

Complications

The two most serious complications are heart failure and post-diphtheritic paralysis. Sudden heart failure may occur early in the disease or during the period of convalescence. Paralysis is met with in about 10 per cent. of the cases, usually in the second or third week. The condition is most frequently observed to affect the soft palate, producing a peculiar nasal intonation and allowing of regurgitation of fluids through the nose. The lower extremities may also be affected with a peripheral neuritis a companied by weakness, wasting, and loss of knee-jerks.

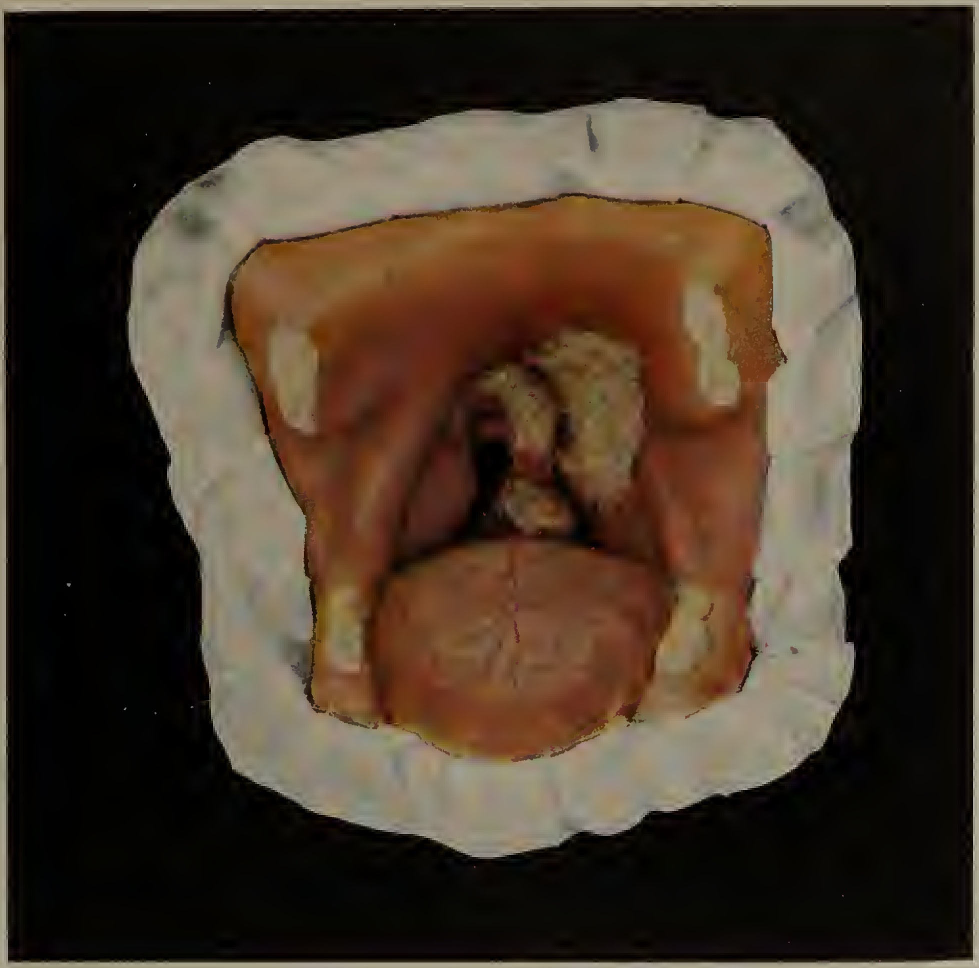


Fig. 223. Inflammatio pseudo-membranacea isthmus faucium (Angina diphtherica)

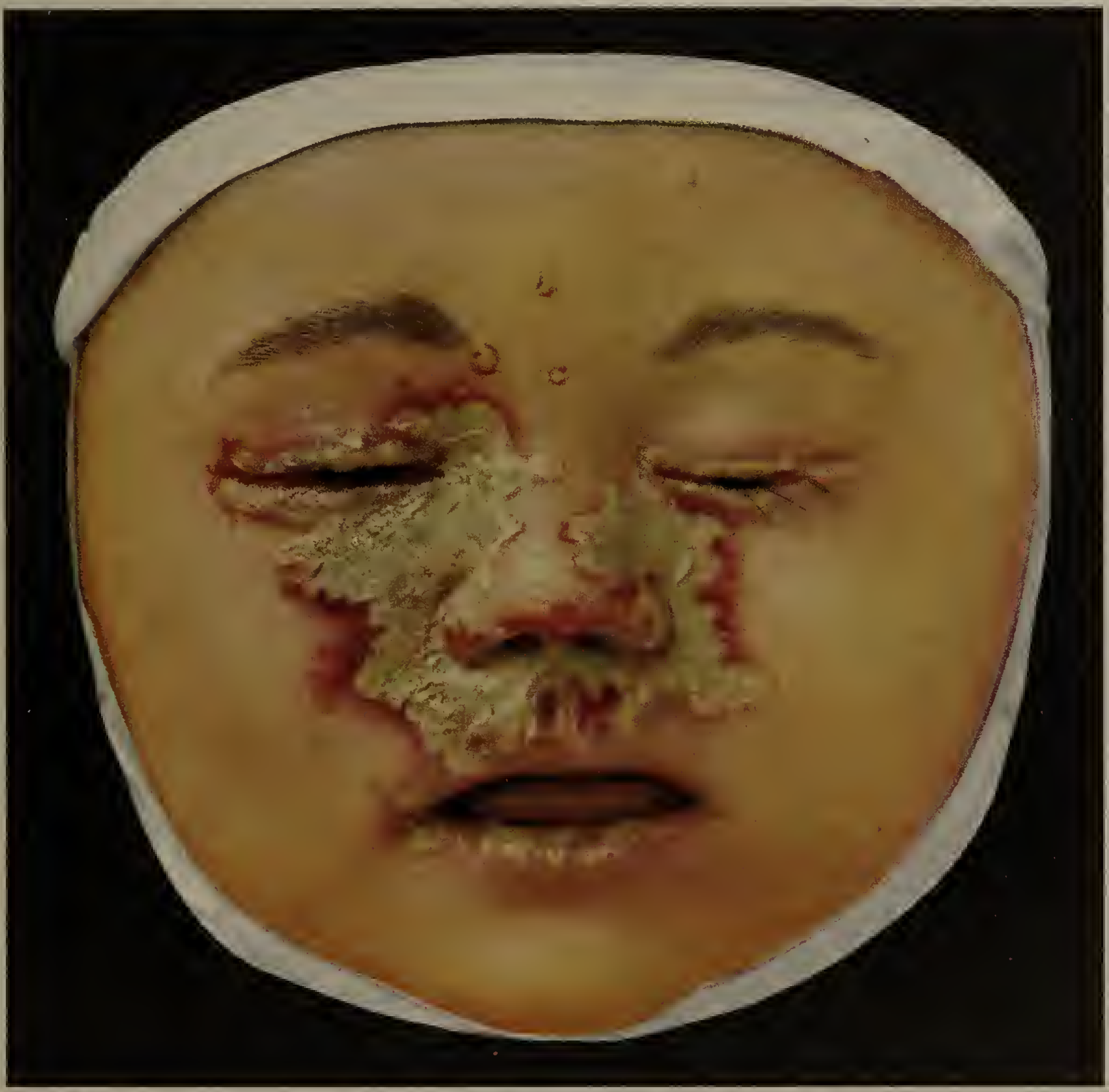


Fig. 224. Dermatitis pseudo-membranacea cutis e bacillis diphtheriae

Diagnosis

Diagnosis is made by the objective characters, and by bacteriological examination. Diphtheria especially affects the uvula, the pillars of the fauces and the soft palate. The age of the patient is of especial significance, and Ker states that in a child under seven years of age, if scarlet fever can be excluded, a patch on the throat is likely to be diphtheria.

The distinction between Vincent's angina and diphtheria is often difficult, as in the latter condition the uvula and soft palate may also be affected. The diagnosis may thus rest upon the discovery of Vincent's organism. Bacteriological examination should be carried out not only in doubtful cases but in every case of diphtheria. A sterile swab, previously rubbed over the suspected lesion, is used to inoculate blood serum; on this medium the Klebs-Löffler bacillus outgrows the other organisms during the first twelve hours, when the culture should be investigated. The correct interpretation of the films made for these cultures requires considerable experience, especially in the case of lesions on the skin, where diphtheroid organisms resembling the true diphtheria bacillus are not infrequently met with.

Treatment

The treatment of diphtheria, in whatsoever situation it occurs, is carried out by the well-known specific serum. Although differences of opinion may exist as to the dosage, all authorities are agreed that the sooner treatment is commenced the more favourable the prognosis. In ordinary early cases an initial dose of 4,000 to 6,000 units is sufficient; this may be repeated at intervals as circumstances demand; as a rule the intramuscular method will be employed. It is of the greatest importance to keep the patient in a recumbent position and, from the earliest moment, to forbid the slightest exertion. After three weeks this rule may be slightly relaxed, but if the pulse shows any irregularity, or if the infection has been of a severe nature, the period of absolute rest should be extended. The Schick reaction is used to test the susceptibility of an individual to diphtheria. If an infiltration, with a circumscribed area of redness, appears at the site of the intradermic injection in twenty-four to forty-eight hours, the reaction is positive; in such cases, it is stated, immunity may be conferred by toxin-antitoxin mixture.

Scarlatina—Scarlet Fever (Plate 122, Figs. 225 and 226)

Scarlatina is an acute, highly contagious disease characterised by fever, sore throat, and a diffuse erythematous rash. The disease occurs in epidemic form, and is especially prevalent in the autumn; it may be spread directly from person to person or indirectly through clothing, or may be carried by healthy individuals who have been in contact with the disease. The causal parasite has not yet been discovered; streptococci are almost constantly present in the throat, and although they have been regarded as the specific cause, it is possible that they merely represent a secondary infection. The incubation period is short, on an average two to three days, after which the disease sets in suddenly with fever, accompanied, as a general rule, by sore throat, headache, and vomiting. The pulse-rate is at first accelerated out of proportion to the febrile disturbance, a sign of considerable diagnostic importance. The face is flushed, except about the nose and mouth, and exhibits the well-known circum-oral pallor. The typical rash appears within twenty-four hours, first on the neck and upper part of the trunk, and thence extending downwards, to become general about the third day. Ker states that the eruption consists of closely-set minute points, usually of a brilliant red colour, upon a paler, but often flushed, background, a description which accurately summarises the typical characters of the rash; its intensity depends to some extent upon the severity of the disease. An eruption of tiny miliary vesicles may accompany the more brilliantly erythematous efflorescences, or there may be minute hæmorrhagic puncta. In the mildest forms the rash may be very slight and disappear rapidly, but in any case its duration rarely exceeds four days; the last traces of the eruption may be found on the legs. Desquamation begins about the seventh day on the ears, neck, and chest, and is usually well marked on the hands by the fourth week. Some degree of congestion of the throat is invariable, and, early in the disease, a distinct punctation develops on the soft palate. In the milder forms simple congestion of the fauces occurs; in others there may be œdema, patchy exudation or even ulceration. The cervical glands are enlarged and tender, and may even suppurate. The tongue, at first heavily furred, has usually desquamated by the fourth day; at this stage it is raw and red, with prominent papillæ, and has been likened to a ripe strawberry (strawberry tongue, Fig. 226).

Course

In favourable cases the symptoms diminish and the temperature falls by lysis, so that by the end of the first week the temperature has become normal and the rash has faded (Ker).

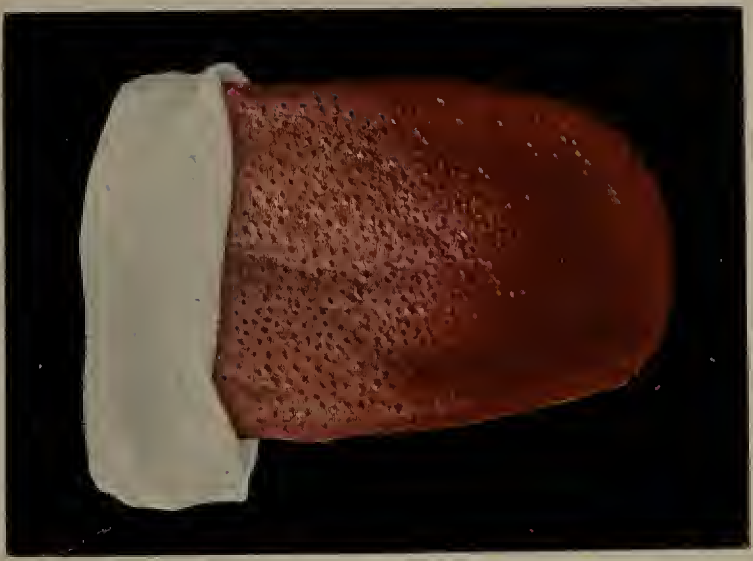


Fig. 226. Scarlatina

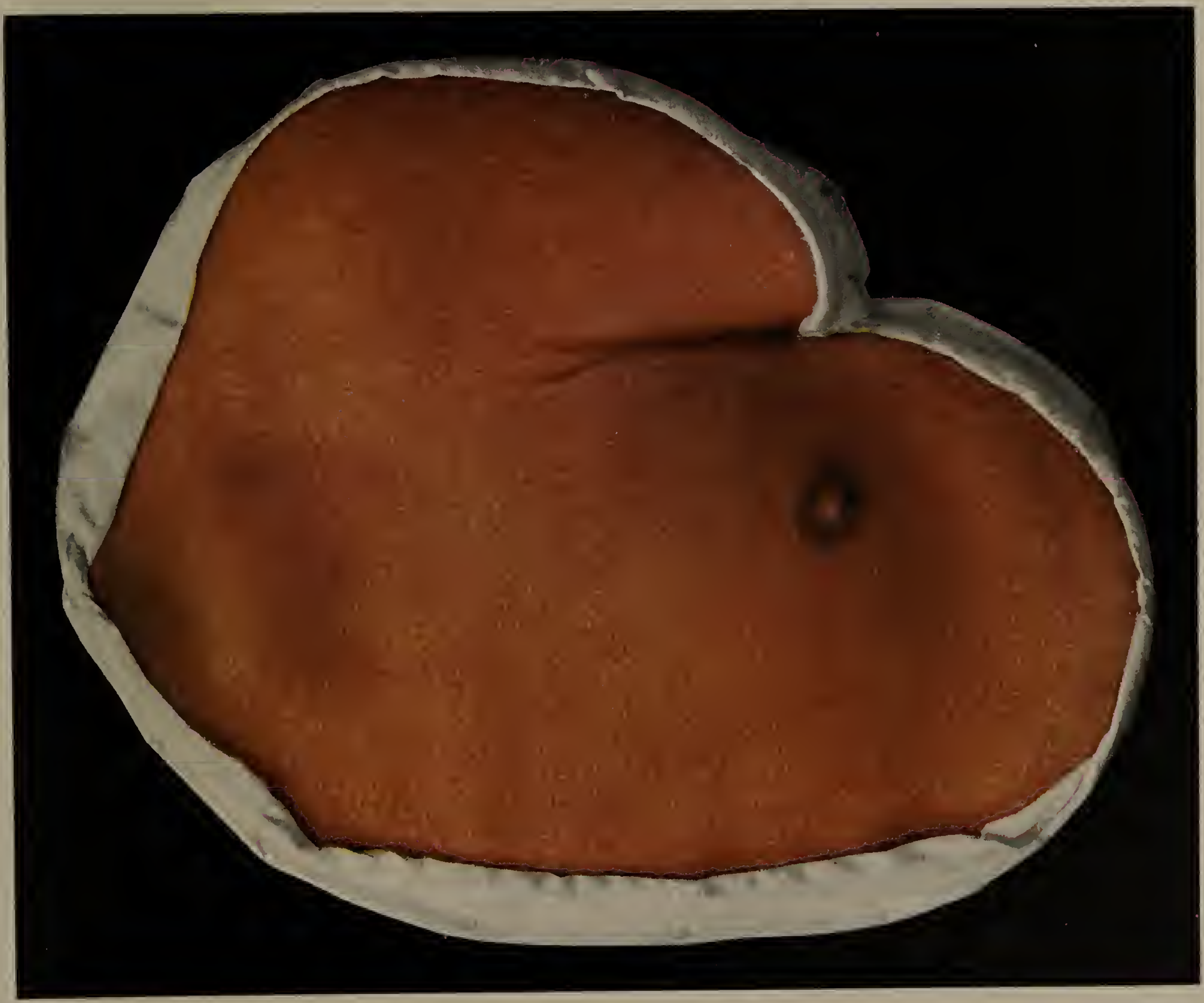


Fig. 225. Scarlatina

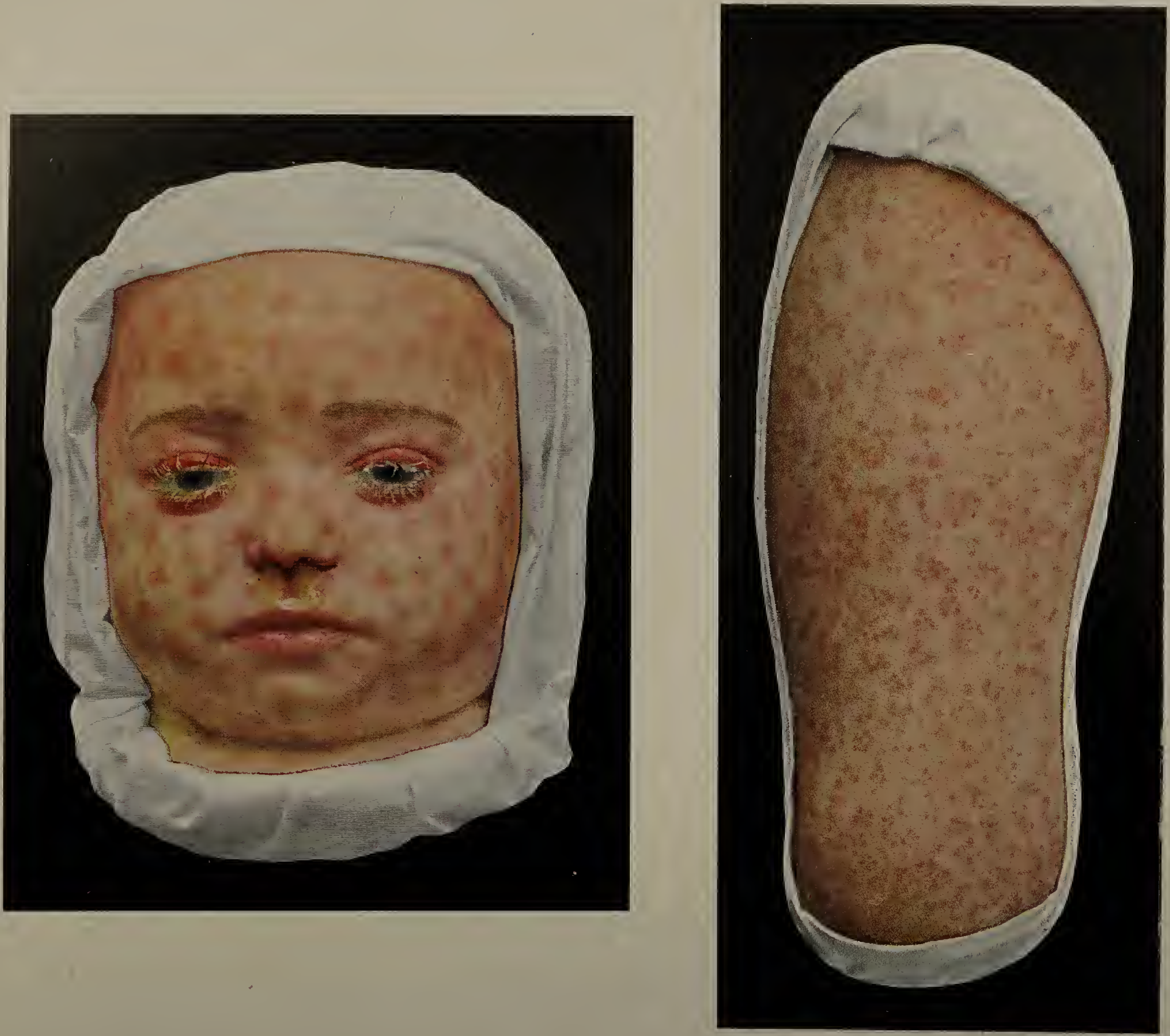


Fig. 227 and 228. Morbilli

In the severe types the prognosis is much less favourable; thus in fulminating cases death may occur within twenty-four hours from the profound intoxication, or, in septic scarlatina, about the third week in consequence of the considerable secondary infection. Various complications may arise to retard recovery or cause death, and of these nephritis is the most important. Nephritis, when it occurs, usually develops during the period of desquamation—that is, between the sixteenth and the twenty-sixth day (Ker). The urine is scanty and contains blood and casts; vomiting about this time should always be regarded with suspicion.

Diagnosis

Scarlatiniform rashes may occur after the administration of various drugs—for example, belladonna and quinine. In recurrent scarlatiniform erythema, a rare disease, the rash may closely resemble that of true scarlatina; the distinction is made by the history of previous attacks.

Treatment

Treatment is mainly symptomatic, and is carried out on general lines. It is wise to keep the patient confined to bed for at least three weeks, with the object, among other things, of diminishing the risk of nephritis. Isolation is essential, and should be continued for six weeks, or for a longer period if there be any discharge from the nose or ears or from a suppurating gland. In all cases the urine should be examined daily and a careful watch kept for the onset of nephritis.

Morbilli—Measles (Plate 123, Figs. 227 and 228)

Measles, like the other acute specific fevers, occurs in epidemics, but differs in its special prevalence among children. The causal parasite has not yet been discovered, although it is probable that it is present in the nasal discharge and in the blood.

After an incubation period of some twelve days, the early catarrhal symptoms manifest themselves abruptly in the form of conjunctivitis, coryza and cough, with fever, often of a relatively high degree. On the second or third day the temperature tends to fall and all the symptoms may then abate, often misleading the practitioner unless he examines the mouth for Koplik's spots. These lesions, consisting of small bluish-white spots on a red base, appear on the buccal mucous membrane, and are easily recognised on the second day of illness. On the fourth day the rash appears, usually about the roots of the hair and behind the ears, whence it quickly spreads over the trunk and limbs;

the temperature again rises, but although the catarrhal symptoms persist, the cough and coryza are, as a rule, markedly diminished. The eruption in its fully developed form consists of slightly elevated, flat, red or pink papules, of a soft or velvety consistence, usually discrete but sometimes grouped together into irregular patterns, leaving areas of unaffected skin between them, even in what is termed confluent measles. The patient at this stage presents a peculiar blotched appearance, with suffused eyes and possibly blepharitis. Then, unless complications occur, the rash fades, the temperature falls and convalescence is established. The complications of measles are of different kinds: the eyes may be affected in various ways and degrees, such conditions as purulent conjunctivitis or keratitis sometimes occurring even in mild forms of the disease; otitis media may also be met with, and is not very uncommon. The most important complications are those of the respiratory tract, especially broncho-pneumonia, which accounts for many of the fatalities.

Treatment.—The patient should be confined to bed during the febrile period, especial care being taken to avoid chill, with the possible subsequent development of some serious respiratory complication.

Symptoms may be treated on general principles as they arise.

Rubella (Plate 124, Fig. 229)

Rubella, also called German measles and rötheln, is a distinct infectious eruptive fever, characterised by the relatively slight degree of the accompanying constitutional disturbance. The incubation period, which may be as long as three weeks, is followed by an abrupt onset marked by some fever, moderate catarrh with sneezing, an eruption, and enlargement of the lymphatic glands. The rash, frequently the first definite sign of the disease, begins on the face and spreads downwards over the body, affecting the dorsal surfaces of the feet last. It is made up of oval or round macules of a pink or pale red colour, sometimes raised, blotchy, and distinctly morbilliform. After twenty-four hours the rash fades from the face, but may then become more profuse on the trunk, resembling the efflorescence of scarlet fever; it is, however, not uniform in degree or appearance in all situations. In most cases the temperature is but slightly elevated, not more than 100°, and the disproportion between the extent of the rash and degree of fever further serves to distinguish the disease. Enlargement of the lymphatic glands, such as the suboccipital and cervical, is a striking feature in

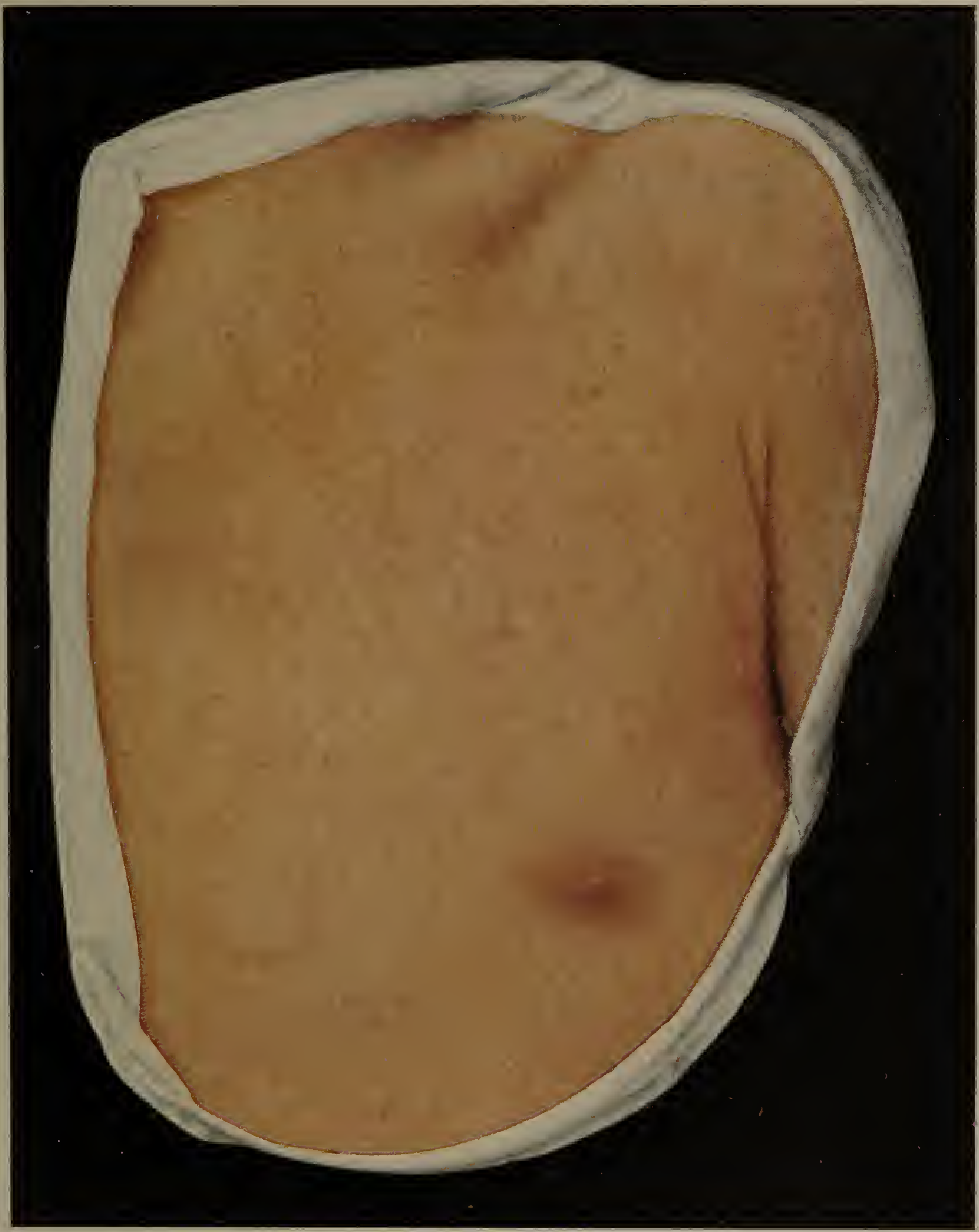


Fig. 229. Rubella

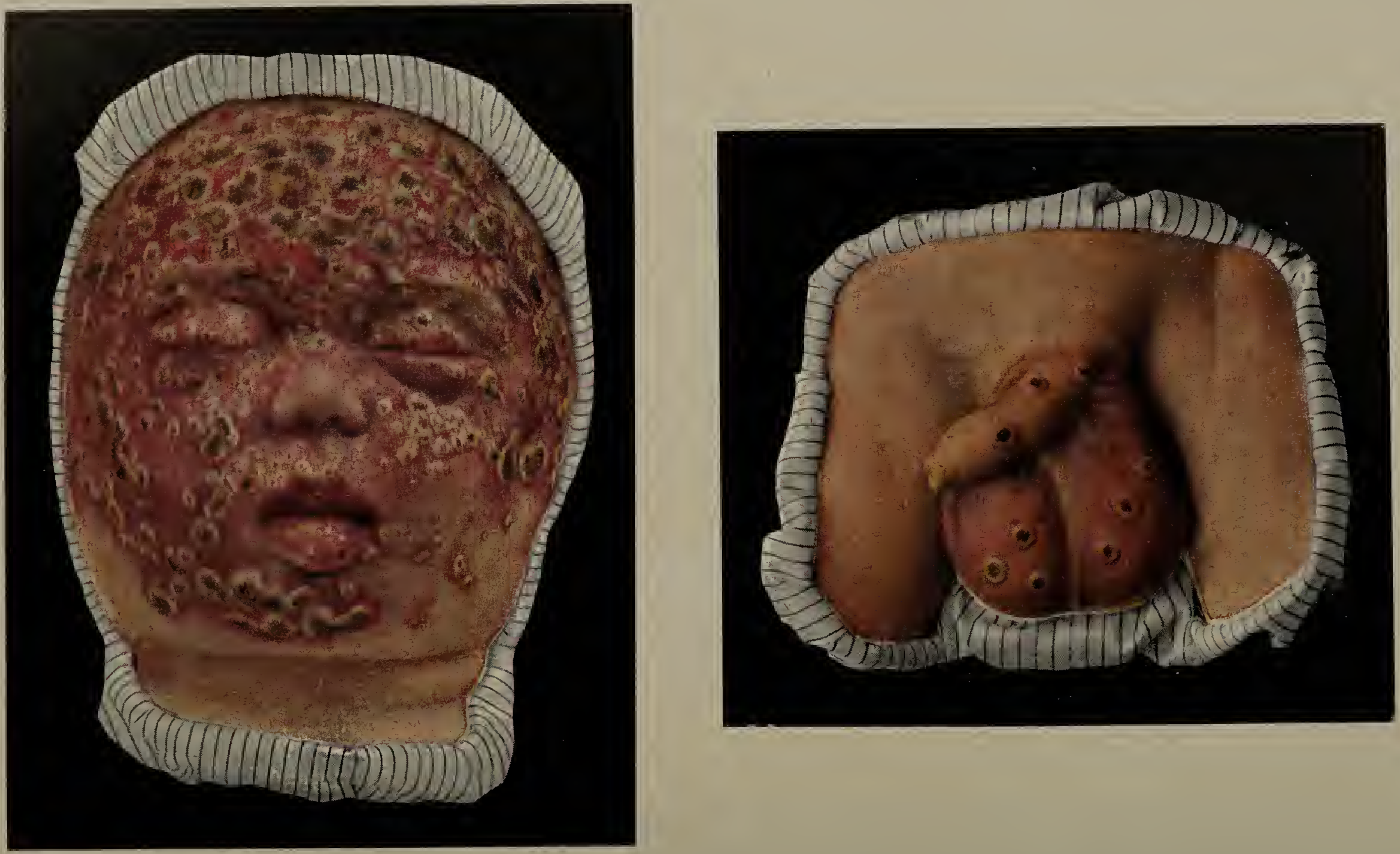


Fig. 230 and 231. Vaccinia generalisata

most cases; the epitrochlear glands, and those in the axillæ and groins, are also usually distinctly palpable.

Treatment.—In most cases it is sufficient to keep the patient isolated for about a week; while the fever lasts, the patient may be confined to bed. The diet and general management will depend upon the degree of constitutional disturbance.

Vaccinia Generalisata (Plate 125, Figs. 230 and 231)

In this very rare condition the eruption, instead of being limited to the site of inoculation, becomes generalised over the body. This generalisation may be the result of the direct introduction of the virus into the blood-stream, or may depend upon auto-inoculation from scratching. It is thus more likely to occur in individuals with some pre-existing dermatosis, such as eczema or impetigo. The rash tends to appear in crops and is accompanied by fever and other constitutional disturbances. It bears some resemblance to smallpox, differing in its more pronounced distribution on the trunk and in the absence of a prodromal stage.

Variola (Plates 126 and 127, Figs. 232 and 235)

Smallpox is an acute, extremely infectious febrile disorder, accompanied by an eruption which is successively papular, vesicular, pustular, and finally scabbed.

The disease is highly contagious, and is chiefly spread by direct contact, but infection may also be conveyed through the agency of a healthy person or by fomites. The carriage of infection by flies is possible, and probably explains the apparent dissemination of the disease by air. The actual causal organism has not as yet been definitely isolated, but whatever its nature may be it is undoubtedly remarkably resistant to desiccation.

Symptoms

The period of incubation is, on an average, twelve days; then the disease sets in abruptly, accompanied by severe constitutional disturbance, pronounced backache, headache, giddiness and vomiting. The temperature rises to 102° or 104°, and is maintained at this level, with slight morning remissions, for about three days. During this prodromal period there is little to distinguish smallpox from other acute infections, such as pneumonia or influenza, unless prodromal rashes develop. Such rashes are met with in 10 to 20 per cent. of all cases, but are more common in adults than children; they are usually either erythematous or purpuric. The erythematous forms tend to appear on the second day of illness, and may be morbilliform or scarlatiniform, or of a vivid scarlet (lobster rash) in the severe toxic variety of the disease. The purpuric or petechial prodromal rashes are more common than the erythematous, and are of greater significance. They are especially observed in the axillæ and groins, or over the "bathing-drawers area." Mixed rashes may also occur, in which both the erythematous and purpuric elements are combined.

About the third day of illness the characteristic eruption begins to make its appearance, first on the forehead and flexor surfaces of the wrists. The evolution of the lesions is deliberate, and, according to Ricketts and Byles, occupies about eight days. The early macule is in a short time replaced by a hard "shotty" papule, which, in about two or three days, becomes vacuolated at its summit; the fully developed vesicle, often but not invariably umbilicated, is seen by the fourth day of eruption or sixth day of disease. By the sixth or seventh day of the eruption the pustule, surrounded by a red areola, has developed, and this gradually matures, the crust beginning to form about the ninth or tenth day of the efflorescence.

Some of the pustules rupture as the result of trauma; others dry up and desiccate by a natural process. The resulting brown or black crusts are gradually detached, and this process is generally completed by the thirtieth day. The degree of pitting or scarring depends upon the depth to which the necrotic process has penetrated in the skin.

The high fever of the prodromal stage usually falls considerably when the early, true eruption appears, rising again with the development of the pustular stage.

The distribution of the rash is extremely important. In general terms it may be said that this is centrifugal, as compared with the centripetal eruption of chicken-pox; the lesions are therefore especially abundant on the face, and distal portions of the arms and legs. Patches or bands of eruption may be determined by some form of mechanical irritation, or even from the pressure of clothing, such as a garter.

The buccal mucous membrane is always attacked, and vesicles can sometimes be recognised on the soft palate while the eruption is still in the papular stage on the skin. The rash may be discrete (Fig. 235), or in more severe cases confluent; the latter term is applied rather to the form assumed by eruption on the face.

Hæmorrhagic smallpox represents a remarkably severe type of the disease, and in one form (purpura variolosa) is almost always fatal.

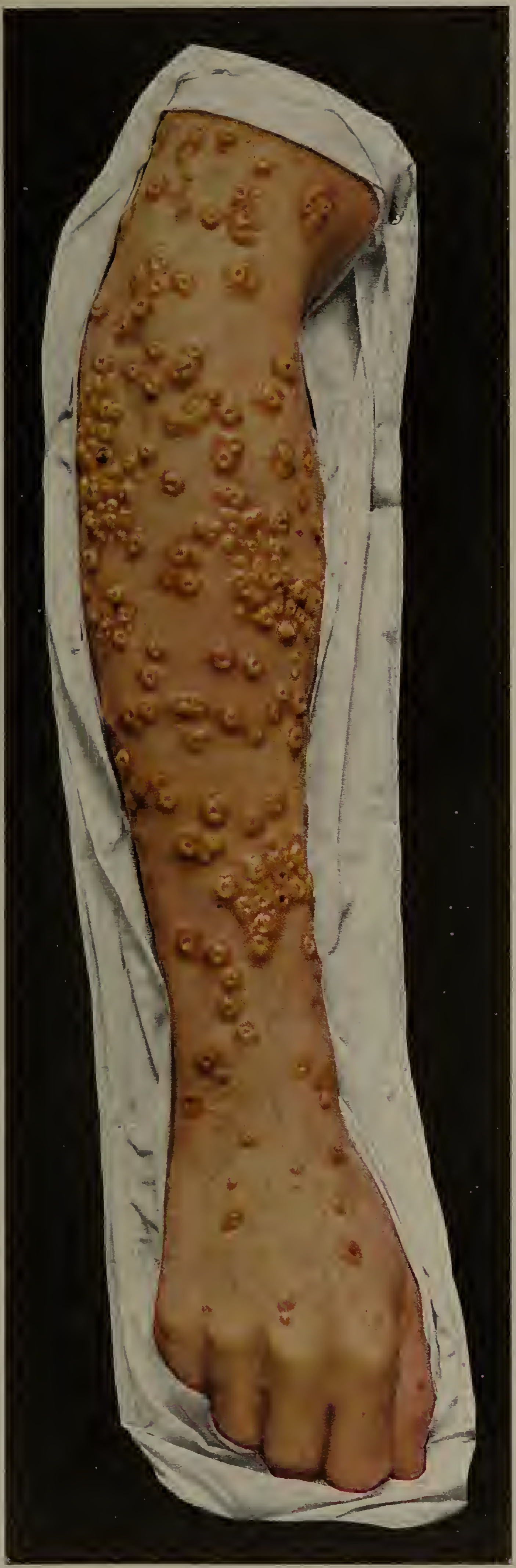


Fig. 232. Variola

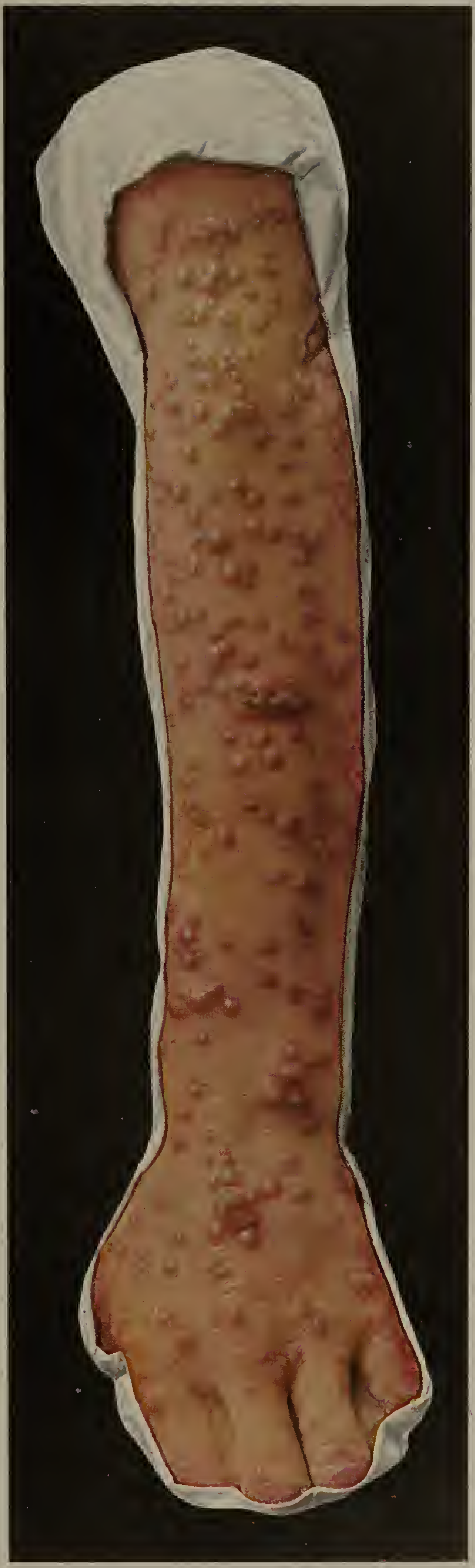


Fig. 233. Varicella

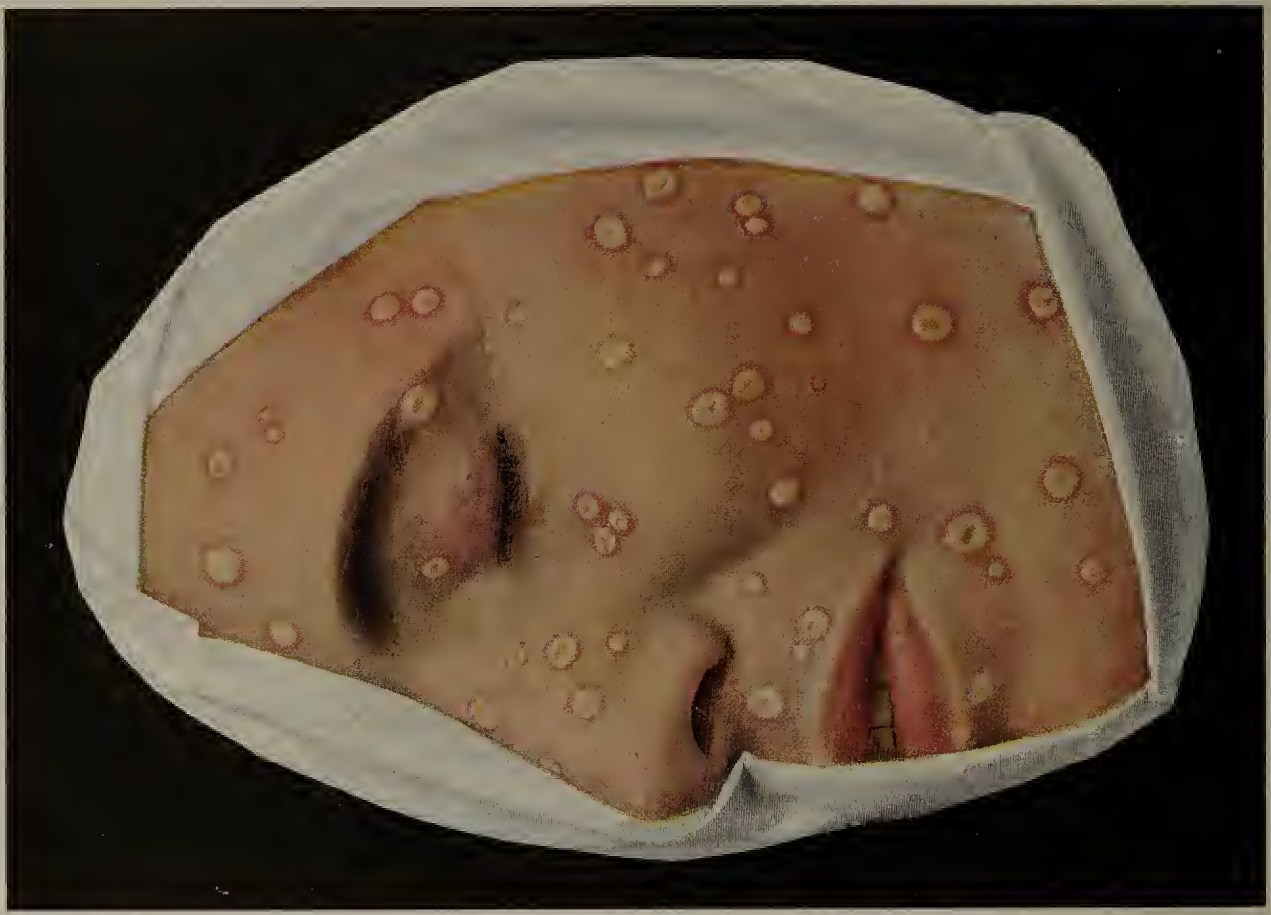


Fig. 235. Variola discreta

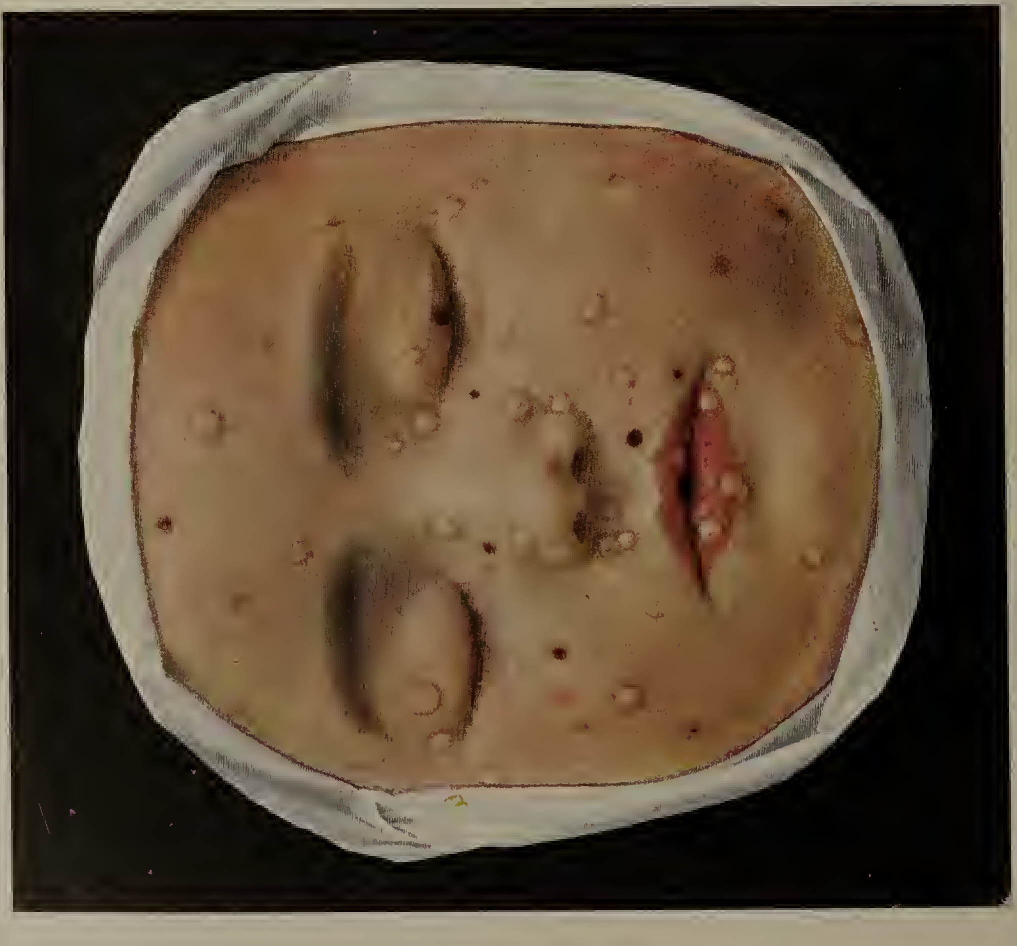


Fig. 234. Varicella

Unusually mild types of the disease are also met with, such as those occurring in vaccinated persons and in the condition termed alastrim.

Diagnosis

During the prodromal stage it is usually impossible to do more than suspect the nature of the complaint. The appearance of a prodromal rash does not necessarily assist, and may indeed mislead if it suggests measles or scarlet fever. When the true eruption appears its course and distribution should lead to the correct conclusion. The fall of temperature at this period is of especial significance. The differential diagnosis of chicken-pox and smallpox is sometimes extremely delicate. As has been pointed out above, the distribution of smallpox is centrifugal, whereas that of chicken-pox is centripetal, and this distinction is of the greatest importance. The lesions of chicken-pox tend to appear in crops, and the vesicle is not definitely umbilicated, although it may exhibit a spurious umbilication; the history of recent vaccination is of some help, and Ker states that in a patient under ten years with good vaccination marks the presumption is in favour of chicken-pox.

Treatment

It is unquestionably the case that, although vaccinated individuals do not always escape infection, vaccination protects the community against smallpox. There is no specific remedy in the treatment of the disease, which should be carried out on general lines. Local treatment of the skin is of no little importance, as it serves to relieve the patient of his immediate discomfort, and to diminish the degree of his subsequent deformity. The face may be covered with a lint mask kept moist and cool with iced water; or, where a mask is not well tolerated, carbolised vaseline may be used; various ointments have been suggested for general use, and it is claimed that the administration of salol by the mouth lessens the subsequent scarring. Exposure of the skin to ultra-violet light has been recommended, and the serum of convalescent patients injected subcutaneously has also been employed in the treatment of the disease.

Varicella (Plates 126, 127, and 128, Figs. 233, 234, and 236)

Chicken-pox is principally met with in children under the age of ten years, but may also occur in adults in whom, in its more severe forms, it sometimes bears a resemblance to smallpox. The period of incubation varies from eleven to twenty-four days, after which the rash is not infrequently observed without definite prodromal symptoms. In adults some degree of fever and headache may mark the stage of invasion, but such symptoms are often entirely absent. The disease is highly infectious, and is spread by direct contact or by fomites. A relationship between herpes zoster and chicken-pox seems to exist, and in many instances the two diseases have been observed to occur in the same family. The eruption, often the first sign, consists of round or oval vesicles of a remarkably superficial character, containing clear fluid. As in smallpox, these lesions are preceded by macular and papular stages, rarely observed because of the extremely rapid formation of the vesicle. The eruption usually appears first on the trunk, and spreads over the body generally. It is especially developed on the back and, in contrast to smallpox, is scanty upon the extremities; lesions are also found on the scalp and mucous membranes. The vesicles tend to come out in crops, and are easily ruptured from friction or scratching. If rupture does not take place, their contents become cloudy and even purulent. Finally, superficial crusts are formed, with which may be included coagulated blood or a little purulent matter, if scratching and secondary contamination have occurred. Some degree of scarring occasionally results, but this, as a rule, is slight. The amount of febrile disturbance is variable, and is usually of mild degree. If severe, it is accompanied by other symptoms commonly associated with fever. Complications such as nephritis or broncho-pneumonia are distinctly unusual; the general prognosis is thus exceptionally favourable.

Treatment.—It is prudent to keep the patient confined to bed for the first week. The itching, if severe, may be relieved with simple dusting powders containing boric acid, and every effort should be made to prevent scratching. Applications of zinc or boric ointment can be employed when the crusts are becoming detached.

Leukæmia Cutis (Plate 128, Fig. 237)

In leukæmia and allied conditions certain manifestations may occur on the skin, and these may, in rare cases, even precede the development of the better-known and more characteristic symptoms. Sir H. Rolleston divides these skin manifestations into two groups as follows: (1) Infiltrations or tumours of the skin histologically identical with the primary disease, and (2) various non-specific disorders and changes in the skin, such as pruritus, erythematous and other eruptions, due to toxins possibly derived from cell destruction in the hæmopoietic system.

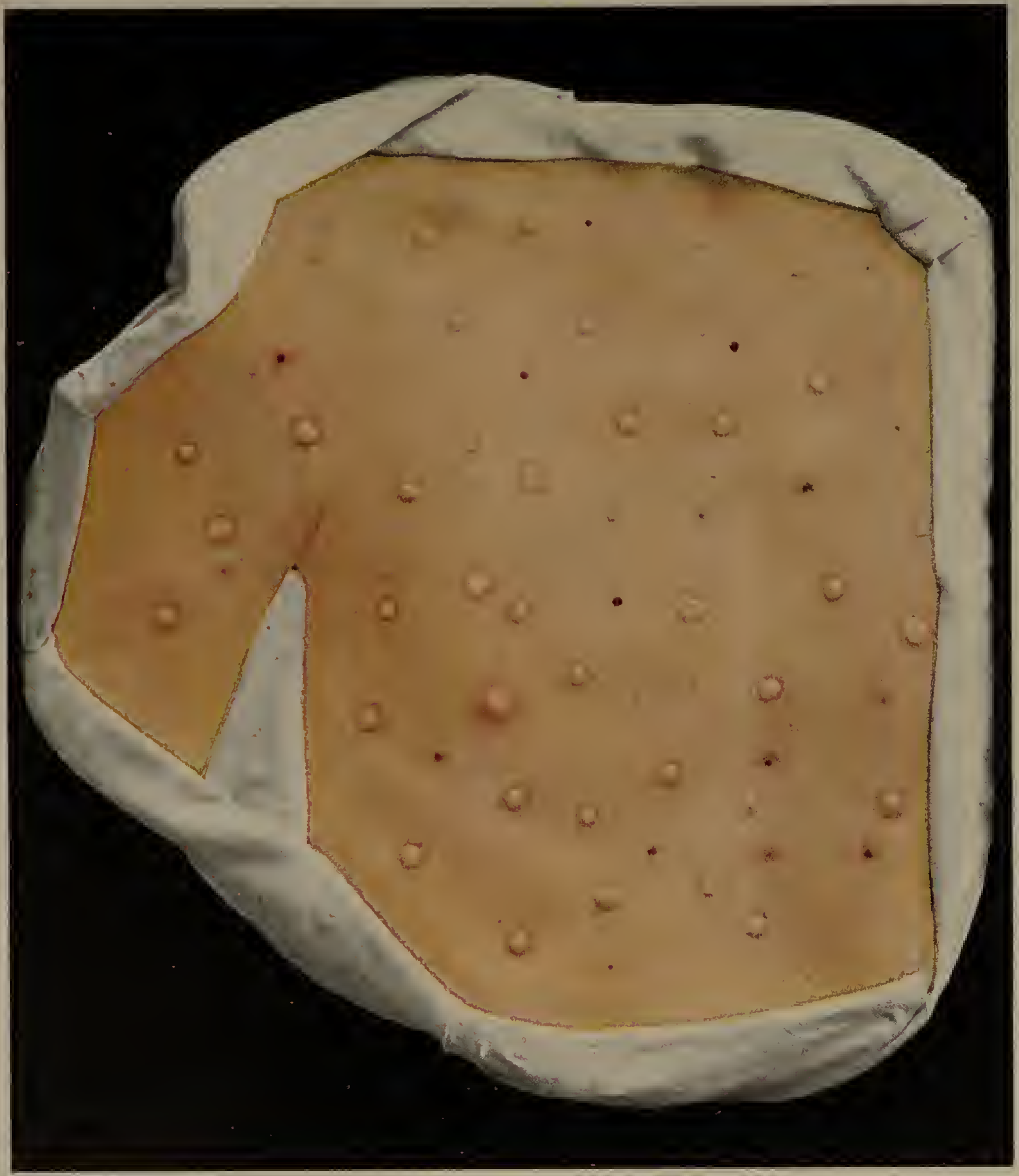


Fig. 236. Varicella

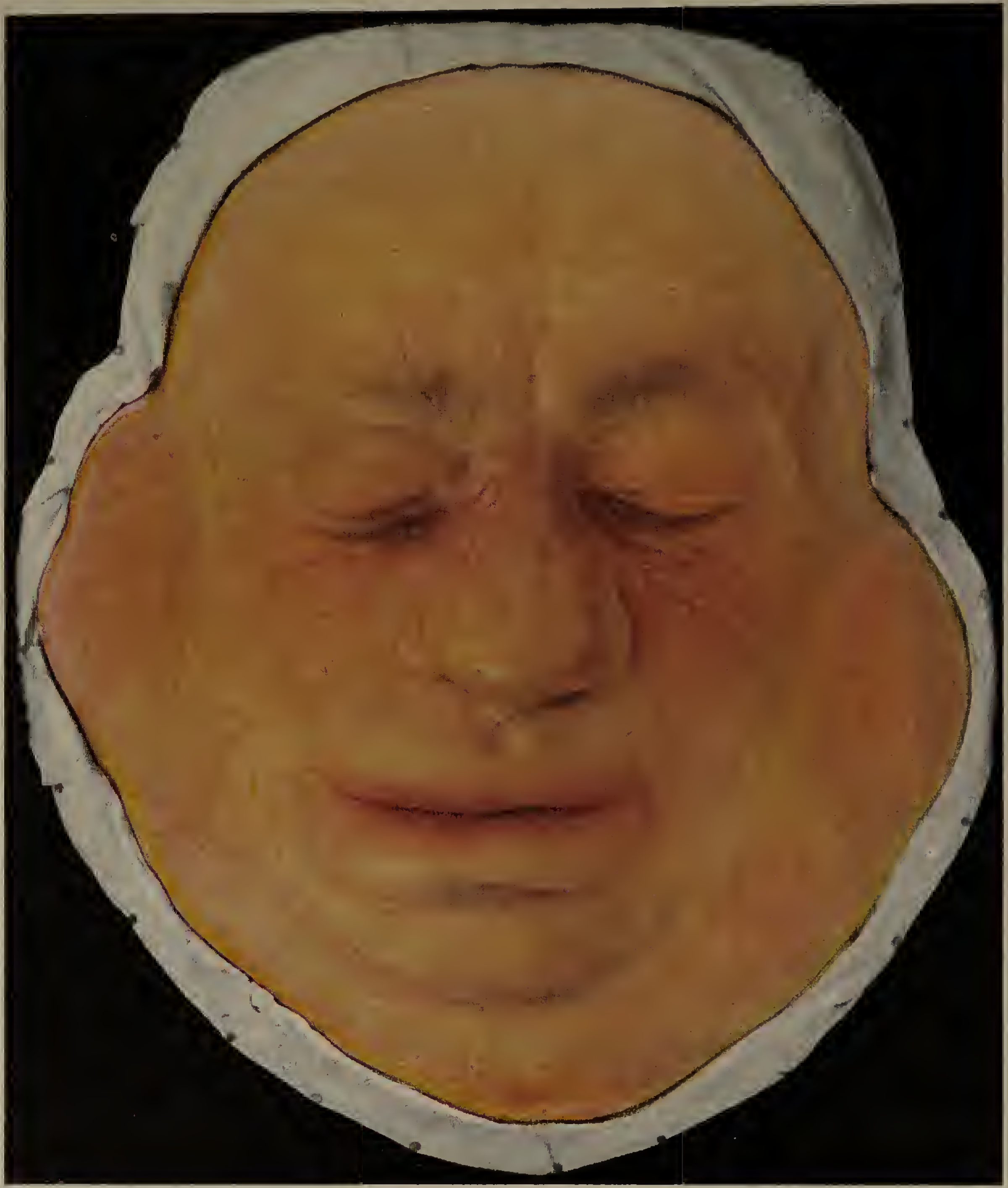


Fig. 237. Leukaemia cutis

In leukæmia cutis the tumours may occur in any stage of the disease; once they have developed they are peculiarly persistent and do not ulcerate except as the result of accidental secondary infection. The actual lesions consist of livid red or plum-coloured nodules, which are usually discrete and symmetrical, but may also occur in confluent masses. The site of predilection is the face, where a pronounced nodular development may occur, the resulting leonine aspect bearing some resemblance to the condition seen in leprosy (Fig. 237). The majority of the examples of true leukæmic tumours of the skin have occurred in chronic lymphoid leukæmia; sometimes the tumours are very numerous, and may even be universal. In lymphadenoma a similar eruption is also occasionally met with, but generalised and severe pruritus is much more common and characteristic.

Diagnosis

The recognition of the various cutaneous eruptions occurring in leukæmia and lymphadenoma often depends upon the discovery of the causal underlying condition. Where either tumour formation, pruritus, or even one of the non-specific eruptions such as erythrodermia, or exfoliative or bullous dermatitis, develops before the characteristic signs of the blood disease manifest themselves, or during an aleukæmic phase, great difficulty will be experienced in coming to a correct conclusion. In all suspicious circumstances an examination of the blood should be made, or one of the tumours may be excised for microscopic examination.

Treatment

Treatment consists in the administration of arsenic either by the mouth or intravenously in the form of neosalvarsan. General treatment of a recognised form should be carried out at the same time.

Venereal Diseases: Syphilis

Syphilis is one of the gravest and at the same time one of the most widespread of all the diseases affecting mankind. There is scarcely a branch of medicine or surgery into which it does not penetrate, and to which it does not contribute to a greater or lesser degree, so that if happily it could be exterminated, the total of disease and disability from disease would be markedly reduced.

The origin of syphilis is obscure, and although considerable researches have been carried out by many independent investigators, it still remains, as Dr. Singer has said, the classical battle-ground of the medical historian. The view that the disease was first brought to Europe from the newly-discovered American continent by the crew of Columbus in 1493 commands popular approval. This view has been challenged on the grounds that syphilis was known in Germany, France, and Italy as far back as the thirteenth century, and was treated with mercury; there is, however, a suspicion that the documents relevant to this had been forged or manipulated, and it is at least surprising that a disease with such definite characters should not have been recognised at an earlier date if it actually existed.

It is admitted by all authorities that an outbreak of syphilis in virulent epidemic form appeared in Europe about 1495, and this lends colour to the theory of an American origin.

Although it had long been known that the disease was contagious, and that the secretions contained the virus, the first great advance in the pathology of syphilis dates from 1905, when Schaudinn and Hoffmann discovered the causal organism, the *Spirochæta pallida*, subsequently called the *Spironema* or *Treponema pallidum*. This parasite is a peculiarly delicate organism, probably a protozoon. On dark-ground illumination, the simplest and most satisfactory method of investigating its special characters, it is seen as a silvery corkscrew-like body or as a row of white spots, moving slowly across the field, rotating on its own axis and sometimes bending. Stained preparations show that it has eight to twelve spirals, and that it measures on an average 10 μ in length. It is an extremely slender organism, about $\frac{1}{4}$ μ broad, and this is one of its most characteristic features. The causal spirochætes are present in the chancre and in the mucous patches in great numbers, and to a lesser degree in the secondary cutaneous lesions. In the tertiary lesions the parasites are very scanty, and are only occasionally observed. The considerable reaction they call forth cannot therefore be attributed to their number; it is the expression of a peculiar sensitiveness of the tissues, a condition termed "allergy." In an untreated case after a time the lesions gradually undergo resolution; this is due to an acquired immunity on the part of the host. The individual, because he still has syphilis, is now refractory to further inoculation, although it has been shown that a local superinfection may occur in the tertiary period. Reinfection is quite distinct from superinfection. In reinfection the individual has been cured of his first attack, and because of this is able to contract the disease for a second time; therefore, when reinfection occurs, the disease follows its ordinary course, the chancre and secondary rash developing in the usual manner with the other recognised phenomena. The fact that reinfection can take place is of considerable importance, for it is evidence that syphilis can be cured, and in this connection it is of no little significance to note that reinfection has been frequently recorded since the introduction of the powerful arsenical remedies, whereas before that time it was only very rarely observed. Cultivation of the organism on ordinary artificial media has not been successful. A number of workers have, however, succeeded in growing the spirochætes, together with other organisms, under anaerobic conditions in stab culture, from which pure growths may be obtained by subculture.

Acquired syphilis is most often communicated during sexual intercourse, but it may also be spread indirectly through some infected medium, or in other ways, such as kissing. Considering how prevalent the disorder is, and that large numbers of persons in the contagious stage follow their ordinary mode of life, the extreme rarity of accidental contamination is surprising. This is no doubt due to the fact that the organism does not readily penetrate the normal skin, and that outside the body it is rapidly killed by drying. Nevertheless, towels kept moist and infected with a mixed culture still contained living spirochætes after eleven hours, and the parasite has been preserved in blood outside the human body for several days (Browning and Watson).

After inoculation has taken place an incubation period of three to five weeks elapses before the first objective sign, the chancre, is observed. It was formerly believed that the disease was at this period still local, but this is now known to be a mistaken view, for the parasites have already been swept along the lymphatic channels, and can without great difficulty be obtained, by puncture with a hypo-

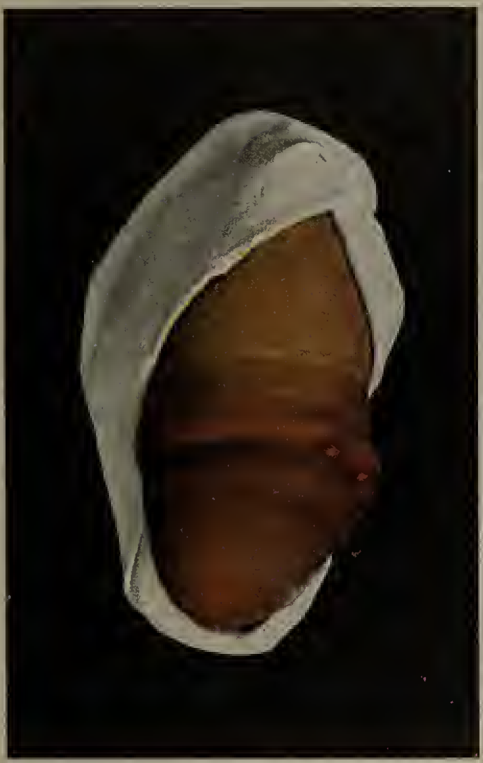


Fig. 238. Sclerosis syphilitica in sulco coronario

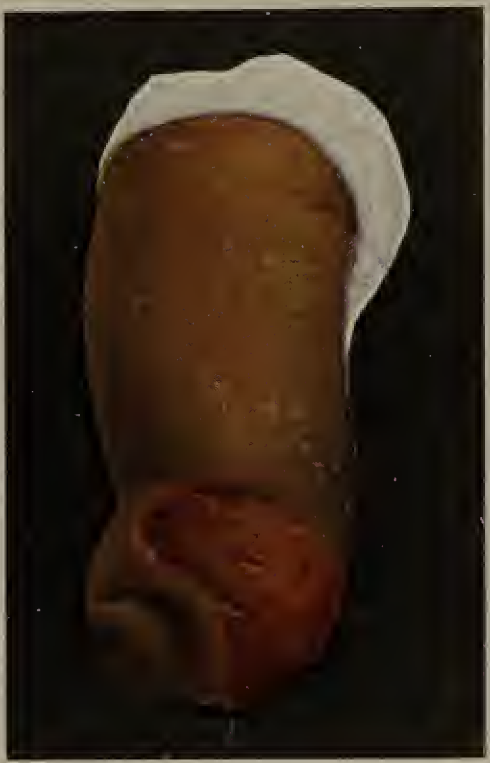


Fig. 239. Sclerosis syphilitica praeputii

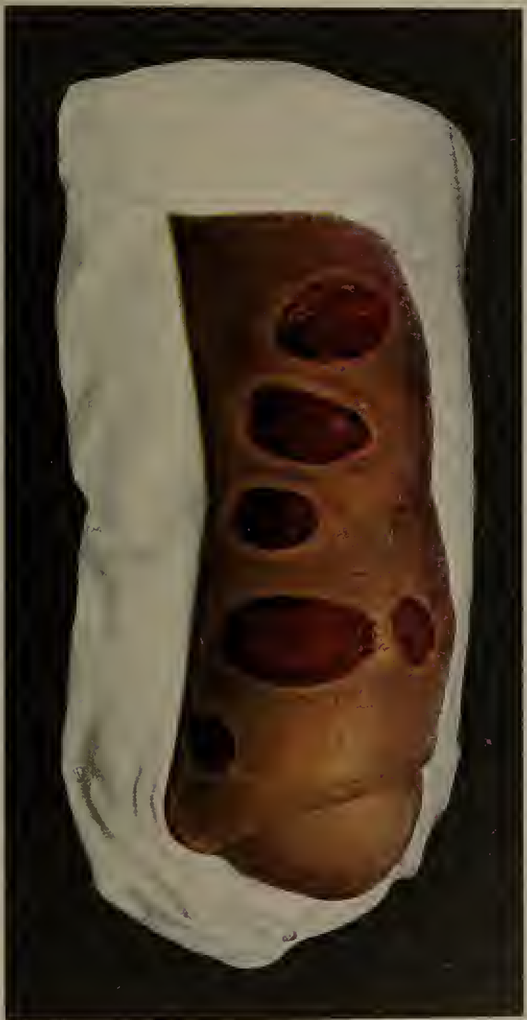


Fig. 240. Scleroses syphiliticae cutis penis

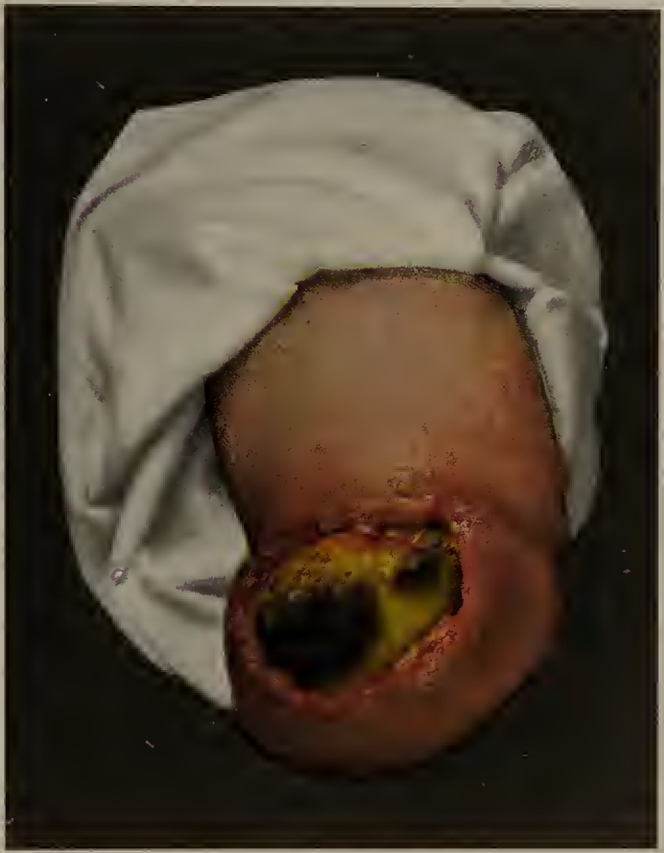


Fig. 241. Sclerosis syphilitica phagedaenica

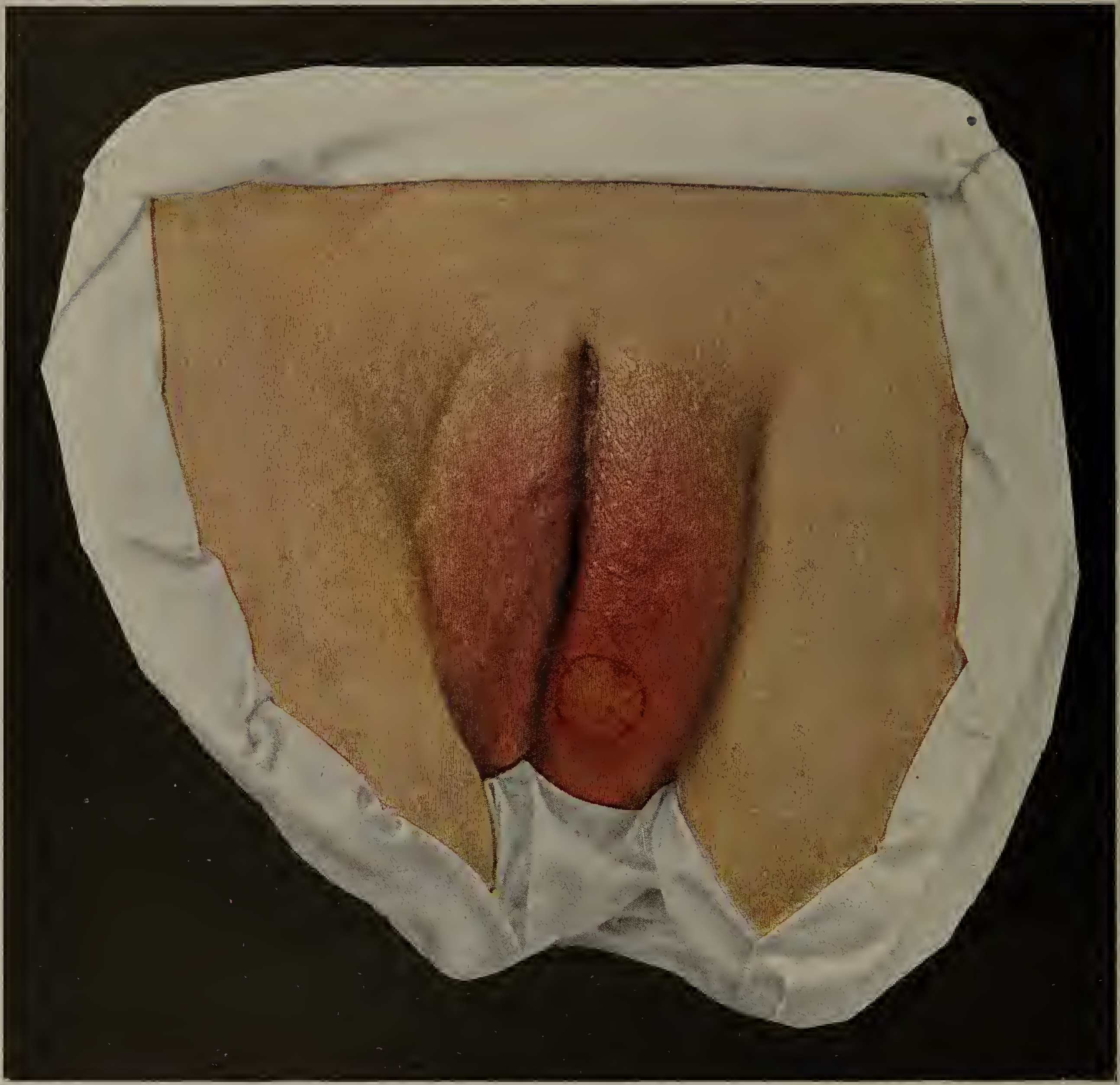


Fig. 242. Sclerosis syphilitica labii majoris

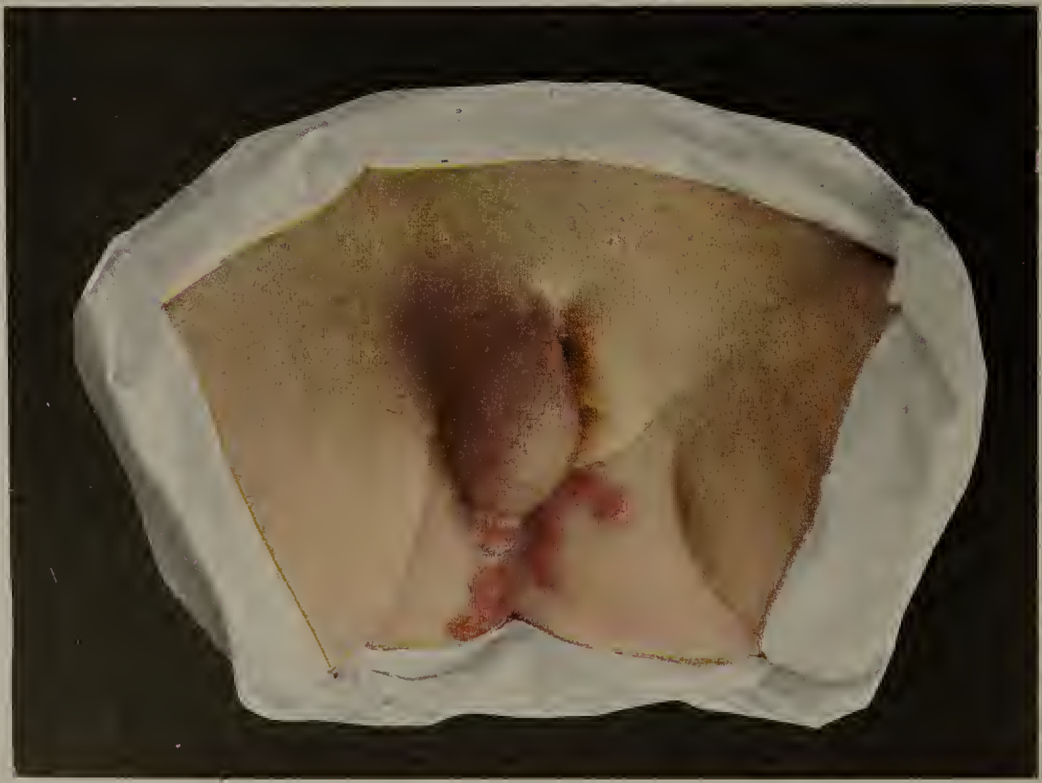


Fig. 243. Sclerosis et oedema indurativum (in infante)

dermic syringe, from the enlarged lymphatic glands draining the area in which the chancre is situated. The disease is thus, by the time the chancre appears, already generalised, a fact of no little importance when the treatment of this early phase is being considered. After a further delay of some five to eight weeks, the secondary rash and other phenomena appear as evidence of the spread of the infecting parasite throughout the body. At this, or at an earlier period, the progress of the disease may be cut short by treatment, which, if successful, destroys every spirochæte and in this way effects cure. Even in untreated cases the sore and the eruption eventually disappear, and in them, and in the inadequately treated, no further manifestation may be observed for a number of years, when one of the late forms of syphilis may evince itself in the skin, the central nervous system, the vascular system, or in some other region of the body such as the eye, throat or ear.

The histological appearances in the skin in the various stages are characteristic. In the primary sore, or chancre, there is a dense infiltration of plasma cells in the corium, with a certain amount of newly formed fibrous tissue; upon this the well-known hard character of the sore depends. The epidermis is stretched and flattened, especially towards the centre of the lesion, and may be eroded or destroyed by ulceration. The spirochætes have a special affinity for the blood-vessels, and in consequence the smaller arteries show proliferative changes.

In the secondary papule a somewhat similar microscopic architecture is observed. There is a dense plasma-cell infiltration, especially about the vessels, forming well-marked perivascular sleeves, and giant cells are sometimes present. Over this infiltration the epidermis may be stretched, or may be proliferated, or, in other cases where scaling is a feature, imperfectly cornified. In the gummatous syphilides there is a greater development of fibrous tissue, and endarteritis is a constant and striking feature. The tendency to degenerative changes, which may terminate in scar tissue or ulceration, further distinguishes the gummatous lesions. Giant cells are much more frequently observed, and for this reason the lesions have a distinct tuberculoid character.

Primary Stage (Plates 129 to 134, Figs. 238 to 251)

The chancre, primary sclerosis, or syphilitic sore appears from three to five weeks after inoculation. This incubation period may be shortened or lengthened in exceptional cases from a minimum of fifteen days to as long as three months, but in such circumstances the reliability of the history is always open to question. Certain recognised features distinguish the chancre, of which the following are the most important: the lesion is usually single, and on palpation it is peculiarly hard or indurated. It is characteristically an erosion, of round or oval form, with a moist, glazed, or finely granular surface. Sometimes there is distinct ulceration, and at other times the sore may present a diphtheroid membrane or crust. Many atypical forms of chancre are met with, and these may mislead unless the observer is aware of their existence. Thus multiple syphilitic sores are not very uncommon; they occur in 15 to 20 per cent. of all cases (Fig. 240). The size of the sore is also variable, and while the majority can be described as small, lesions as large as half a crown are sometimes seen (Fig. 239). The form assumed by the chancre is also subject to considerable variation, and may be a superficial abrasion which heals rapidly and, in consequence, not infrequently passes unnoticed.

The papulo-erosive type is more common, is markedly indurated, and is frequently associated with a non-inflammatory œdema of the prepuce. In the typical Hunterian sore the lesion commonly occurs on the inner surface of the prepuce or in the sulcus; there is marked induration, so that, on drawing back the foreskin, the observer is reminded of the feel and appearance on everting the upper eyelid. The genital sores in the male generally develop on the surface of the glans penis, but they may occur in other situations—at the orifice of the meatus, or within the urethra, the last situation being one of extreme rarity. Occasionally the sore becomes phagedænic with marked destruction, accompanied by a peculiar offensive odour (Fig. 241). In the female the primary lesion often escapes observation; it is usually situated on the labia, the clitoris, or occasionally on the cervix (Fig. 242). As in the male, a non-inflammatory œdema may accompany the chancre (Fig. 243). A primary sclerosis on the vaginal wall is peculiarly rare, and when it occurs does not as a rule present itself in a typical form.

Extra-genital Chancres.—Although from the nature of the disease the genital organs are by far the commonest site of the primary lesion, there is no region of the body upon which a syphilitic chancre may not develop. On the *breast* the region of the nipple may be affected, especially in wet-nurses, the disease in them being contracted from an infant suffering from congenital syphilis (Fig. 244). Chancres of the *tongue* are more common, and may be multiple (Fig. 245); but the single sore is more often observed, generally on the anterior two-thirds

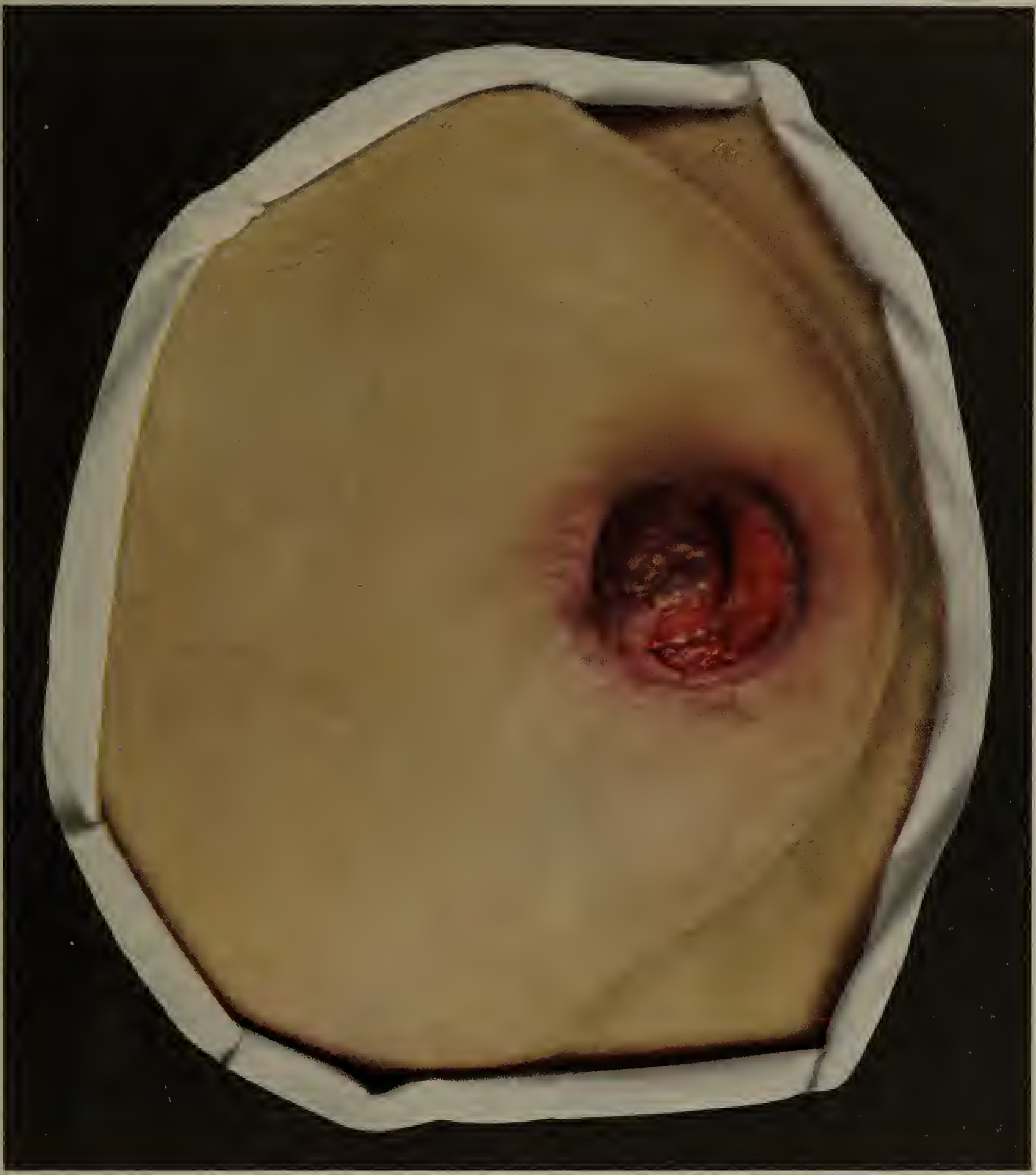


Fig. 244. Sclerosis syphilitica mamillae

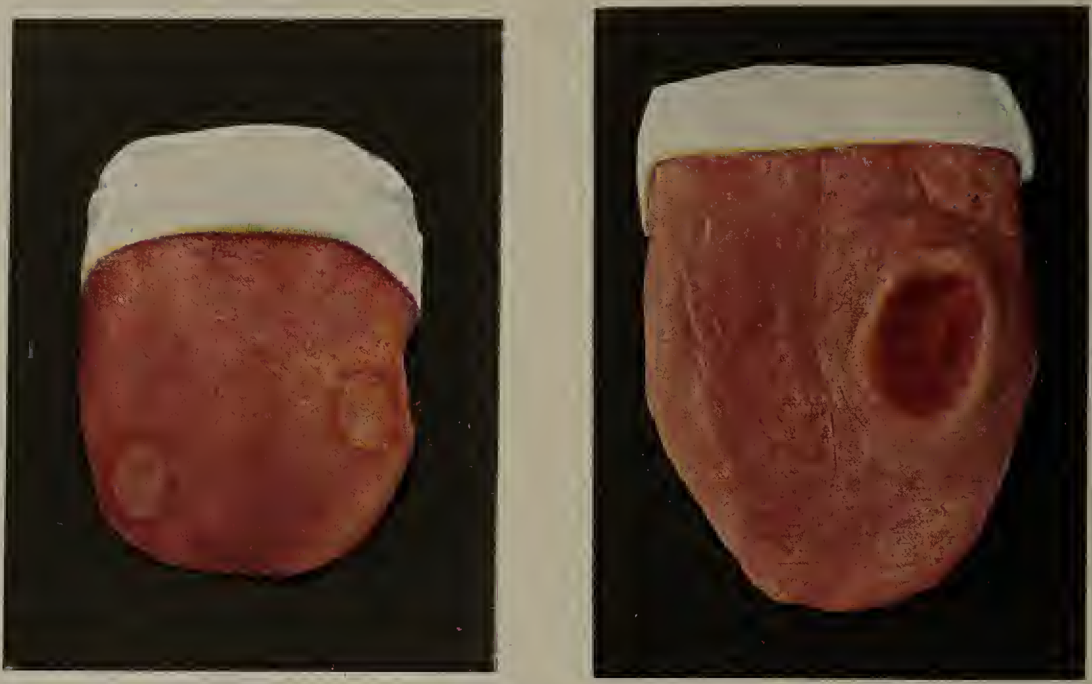


Fig. 245 and 246. Scleroses syphiliticae linguae

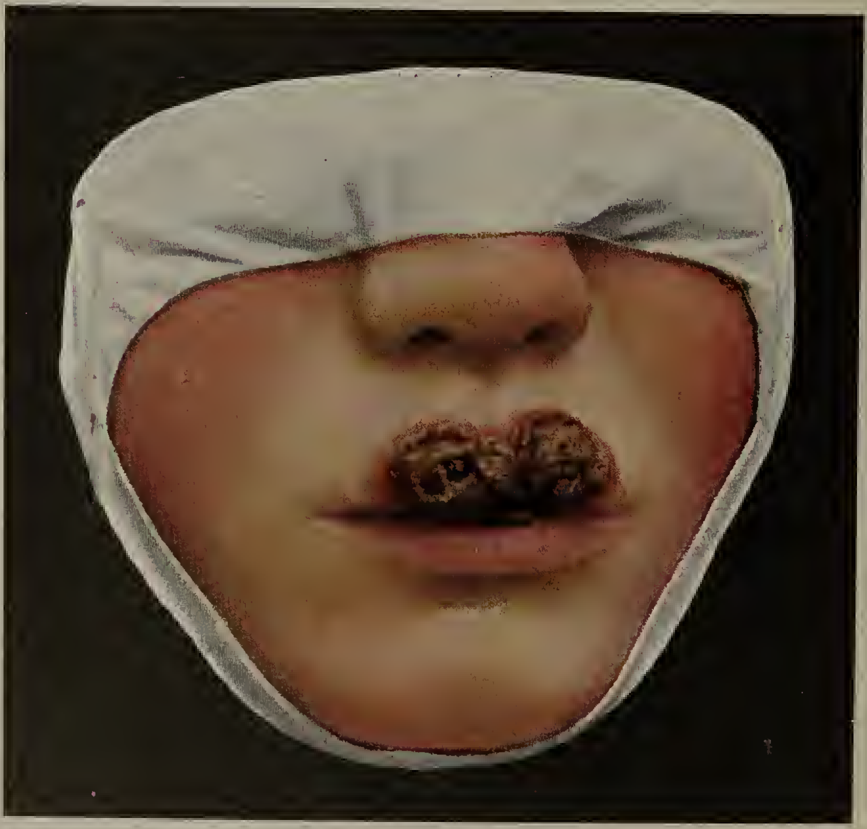


Fig. 247. Scleroses syphiliticae labii superioris

of the dorsal surface, either in the form of a superficial erosion or as a hard, indurated lesion (Fig. 246). A chancre on the tongue is accompanied by marked enlargement of the submaxillary glands, a feature of no little diagnostic importance. Chancre of the *lip* is one of the commonest forms of extra-genital sore, infection in such cases being conveyed by kissing, or more rarely through the medium of a cup or other vessel. Either lip, or the skin in the region of the lip, may be affected (Figs. 247 and 248). The lesion is usually single and crusted, and enlargement of the neighbouring lymphatic glands is striking and constant.

Extra-genital chancres may be met with in surgeons and midwives on the *finger*, the disease being contracted from an infected patient. When situated at the base of the nail, the most common position, the sore usually assumes a crescentic form with a granular surface (Fig. 249). The nail is eventually shed, and if it grows again it is usually deformed. A chancre may also develop on other parts of the finger in the form of a chronic indurated sore (Fig. 250). The digital chancre is accompanied by an enlargement of the epitrochlear and axillary glands.

A primary lesion of the *tonsil* is comparatively rarely seen in Great Britain, although it appears to be much more common on the Continent. The sore is unilateral and relatively painless; in almost all cases it is covered with a diphtheroid membrane. The enlargement of the neighbouring glands is considerable, and this feature, among others, points to the nature of the condition.

Diagnosis

Any sore on genital regions should be regarded with suspicion even in the absence of a history of risk of infection. The probability of syphilitic infection is greatly enhanced if there is an accompanying enlargement and induration of the lymphatic glands draining the affected region; this adenitis usually becomes evident about a week after the chancre has developed. The long incubation period is of great diagnostic importance, the appearance of the chancre being delayed until three to five weeks have elapsed from the moment of inoculation.

The actual diagnosis should in every case be confirmed by the microscopic examination of the secretion. For this purpose serum is obtained from the depths of the sore with a glass pipette, or by scraping the edge of the chancre lightly with a knife, care being taken to avoid any considerable admixture of blood. If the sore has been treated with antiseptics, spirochætes will almost certainly not be found at first. In such cases a simple saline dressing should be employed for two or three days, and the examination then carried out as above. The material may be examined by dark-ground illumination, by staining the secretion with Leishman's solution, or by mixing it with a little distilled water, adding Indian ink and spreading the mixture on a slide. The juice obtained from an enlarged inguinal gland by puncture with a hypodermic syringe may be similarly investigated.

Certain other spirochætes, such as *Spirochæta microdentia* and *S. gracilis,* may be confused with the parasite of syphilis. It is important, therefore, to submit the sore to a preliminary surface cleansing, and to obtain the secretion from its deeper part. The identification of *S. pallida* in the sore is doubly informative; it tells, first, that the patient has syphilis, and, secondly, that the lesion is of a syphilitic nature. The Wassermann reaction becomes positive after the sore has been present for about three weeks. A positive Wassermann reaction has not the same value as the discovery of the spirochætes, unless it is observed to change from negative to positive. In any case, where an extra-genital form of syphilis is suspected, tests similar to those employed in the diagnosis of the genital chancre should be carried out. Sometimes the diagnosis is extremely difficult, and in other cases the condition may be overlooked because the possibility of syphilis is not entertained.

Differential Diagnosis

As the result of sexual intercourse a number of different conditions may develop on the genital organs, and these have, in particular, to be distinguished from primary syphilis. In scabies a single impetiginous crust, bearing some resemblance to a chancre, is sometimes observed on the penis. The presence of scabietic lesions elsewhere and the nocturnal itching will usually be sufficient to distinguish the two diseases, but it should be remembered that a double infection may have taken place, and that, later, manifestations of syphilis may make their appearance. Herpes simplex is not an infrequent sequel of coitus in both sexes. In the early vesicular stage the nature of the lesion is obvious; later, after rupture, and especially if mercurial applications have been used, the resemblance to a chancre may be close, and there may even be induration. The soft sore, of all conditions, is the most likely to be confused with primary syphilis. The distinguishing features are the short incubation period of from two to five days, the multiple character of the lesions and their irregular outline.

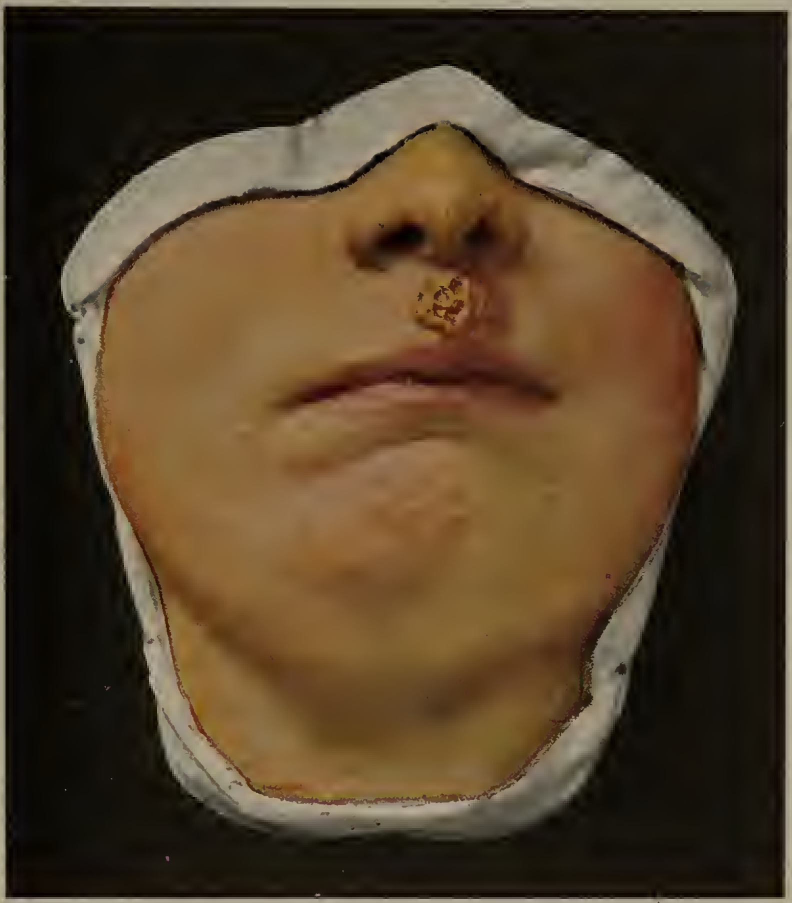


Fig. 248. Sclerosis syphilitica labii superioris

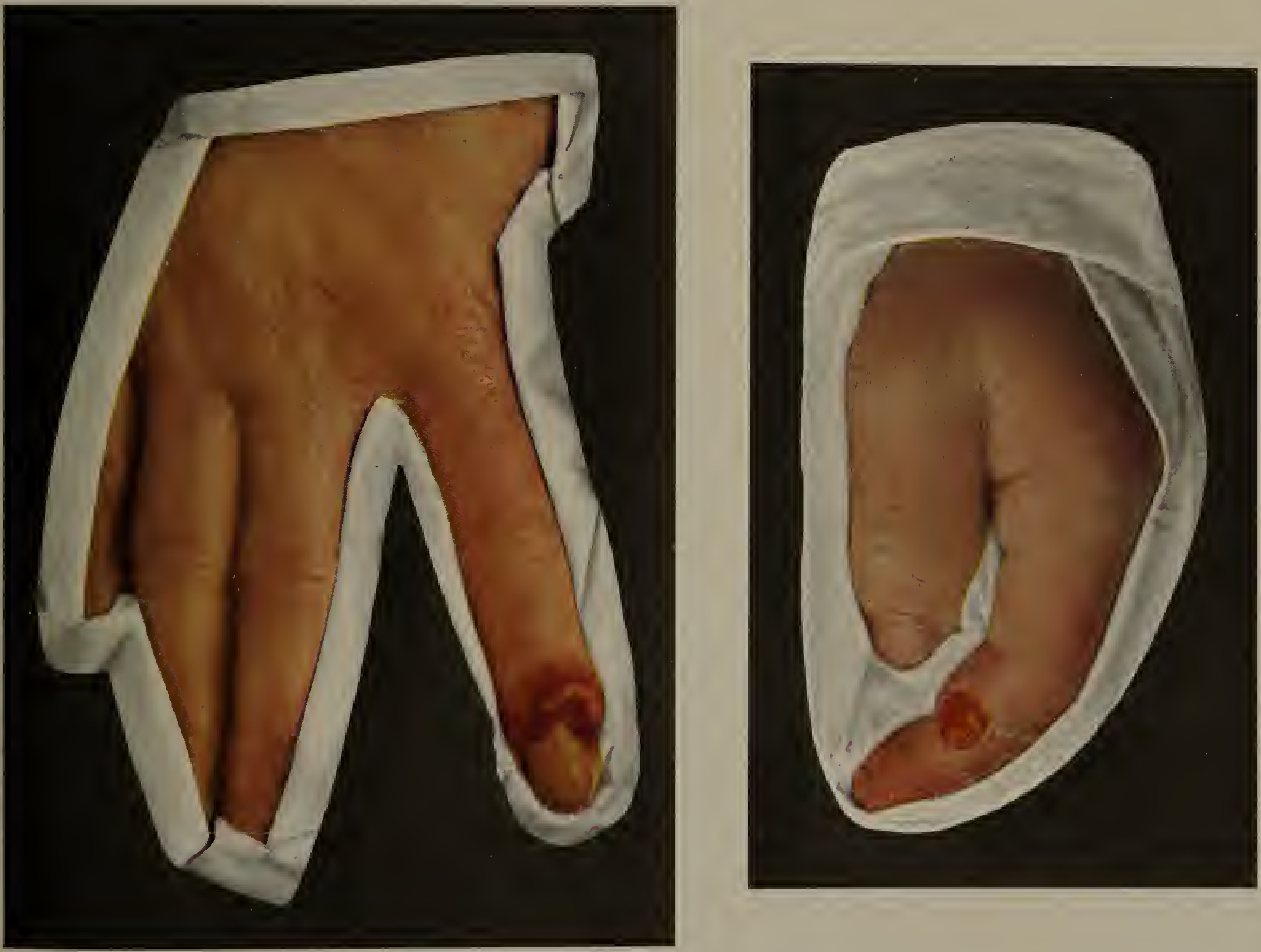


Fig. 249 and 250. Scleroses syphiliticae digiti

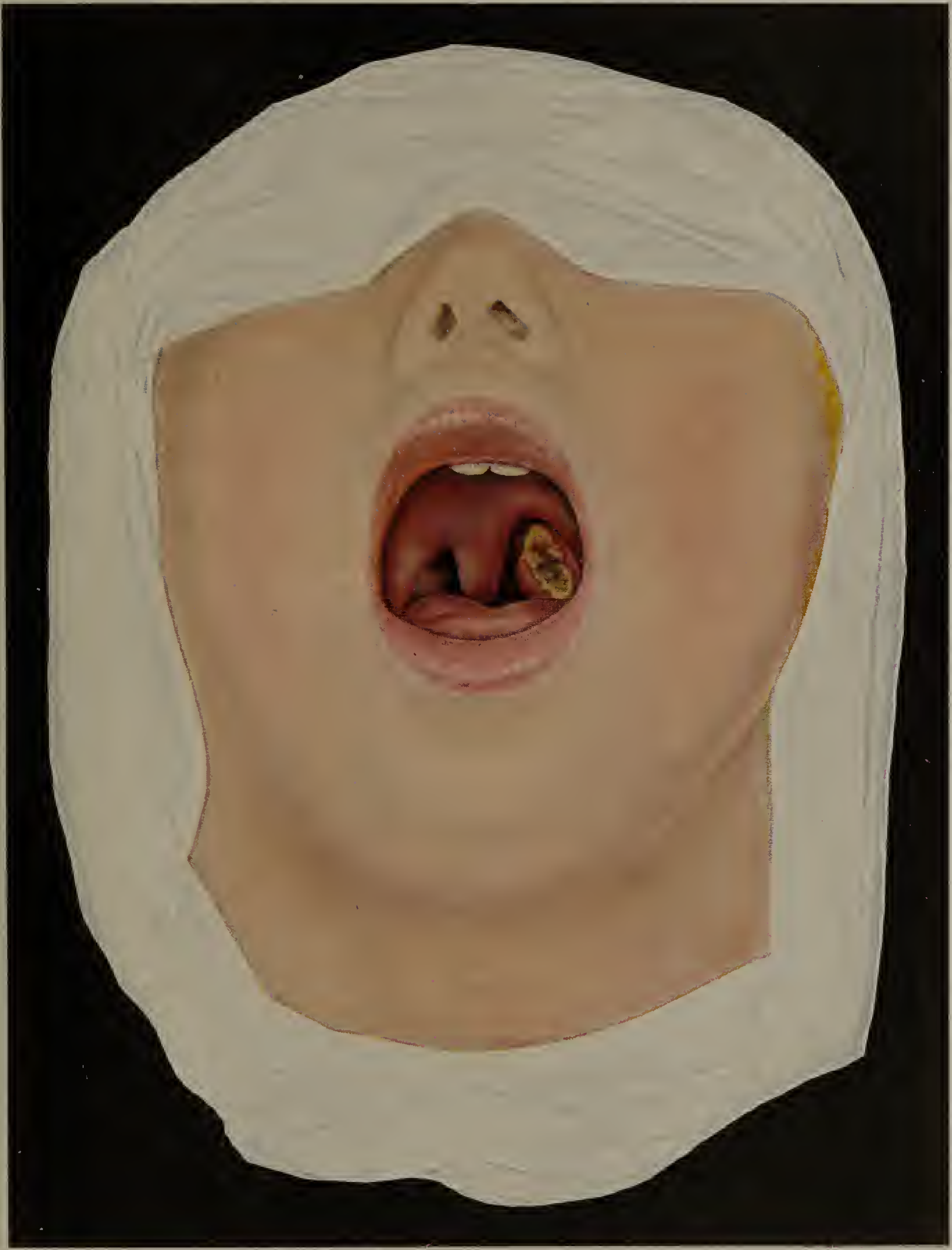


Fig. 251. Sclerosis syphilitica tonsillae

Further, they are definitely ulcerated, and there is no induration, unless this has been caused by treatment. The glands draining the area are enlarged and painful, and are liable to suppurate. When a double infection has taken place, as may occur, the characteristic features of syphilis develop at a later period.

Secondary Syphilis

The secondary period of syphilis marks the spread of the spirochætes throughout the body by the blood-stream. This generalisation probably occurs relatively early and may be complete, in some cases at least, by the time the chancre has developed. The characteristic manifestations are nevertheless not immediate, but are usually delayed for some five to eight weeks after the development of the sore. There is a primary latent period between inoculation and the appearance of the sore at the site of inoculation, and then a second latent period before the secondary symptoms are observed. In a very rare form, termed *syphilis d'emblée,* the primary manifestations do not exist or are not observed, the first manifestations of the disease corresponding with those of the secondary period.

The phenomena of the secondary period include symptoms of general intoxication, and an eruption on the skin and mucous surfaces. Thus the patient often develops an irregular fever, which in exceptional circumstances may be very considerable. In one case published by the writer the temperature rose above 102°, and was accompanied by severe constitutional disturbance until abruptly terminated by an intravenous injection of salvarsan. Headache and pain in the joints and limbs are not uncommon, and jaundice may occur. Acute yellow atrophy of the liver has even been recorded, and it is interesting to note that both this and jaundice were well known as complications of syphilis long before the era of arsenical medication. Albuminuria, although often referred to, is in the writer's experience uncommon. The accessible lymphatic glands are universally enlarged and indurated, and are, in most cases, distinctly palpable in the epitrochlear and suboccipital regions. The disease may also affect the hair of the head, which is then either thinned generally or falls out in a patchy, moth-eaten manner (see Fig. 97).

The eruptions on the skin and mucous membranes are by far the most important signs of the secondary stage. These rashes are of various kinds—erythematous, papular, pustular, and pigmentary. The individual lesions assume different forms—round, oval, or annular; or they may combine to form groups or figures, as in the corymbose eruption. Very often a variety of different elements are represented at the same moment, and upon this polymorphous character of the rash many authorities lay considerable stress. The eruption does not itch and is not painful, although exceptions to this general rule are sometimes encountered.

Macular Syphilide (Plates 135 to 138, Figs. 252 to 255)

The earliest eruption, the macular or roseolar, usually appears about six weeks after the development of the sore. The individual lesions consist of rose-coloured round, oval, or irregular spots. They are developed on both sides of the body, especially on the flanks, and may in exceptional cases be so numerous as to be confluent (Fig. 252). On the other hand, the roseola is sometimes very poorly developed, being difficult to see and actually invisible in artificial light. The macular syphilide is never squamous, a feature which often serves to distinguish it from other somewhat similar eruptions.

The tertiary roseola (syphilis maculosa recidiva, Fig. 254) is occasionally met with in later periods of the disease; it is characterised by circinate lesions of a dark red colour, sometimes with a polycyclic contour. This form of the eruption is observed on the trunk and limbs; it may also occur in congenital syphilis.

Diagnosis

The syphilitic roseola has to be distinguished from drug eruptions and from pityriasis rosea. The drug eruptions usually itch, and there is a history of taking the causal drug, which may be detected in the urine. Pityriasis rosea is characteristically squamous, a feature never observed in the macular syphilide. The positive diagnosis of macular syphilis should not be made by the objective characters of the rash alone, but should be confirmed by the general glandular enlargement and by the corresponding lesions in the throat. The Wassermann reaction, at this stage, is almost invariably positive.

Pigmentary Syphilides (Plates 135 and 138, Figs. 252 and 256)

During the secondary period a characteristic form of leucoderma may develop on the neck, and, although very rarely, in the axillæ, in the form of white spots on a darker background or as an angular network. The eruption is distinctly uncommon and is almost entirely confined to the female sex; from its origin it has been called the "collar of Venus." The white areas vary in size, but are usually about the dimension of a threepenny-piece. Treatment has little or no influence,

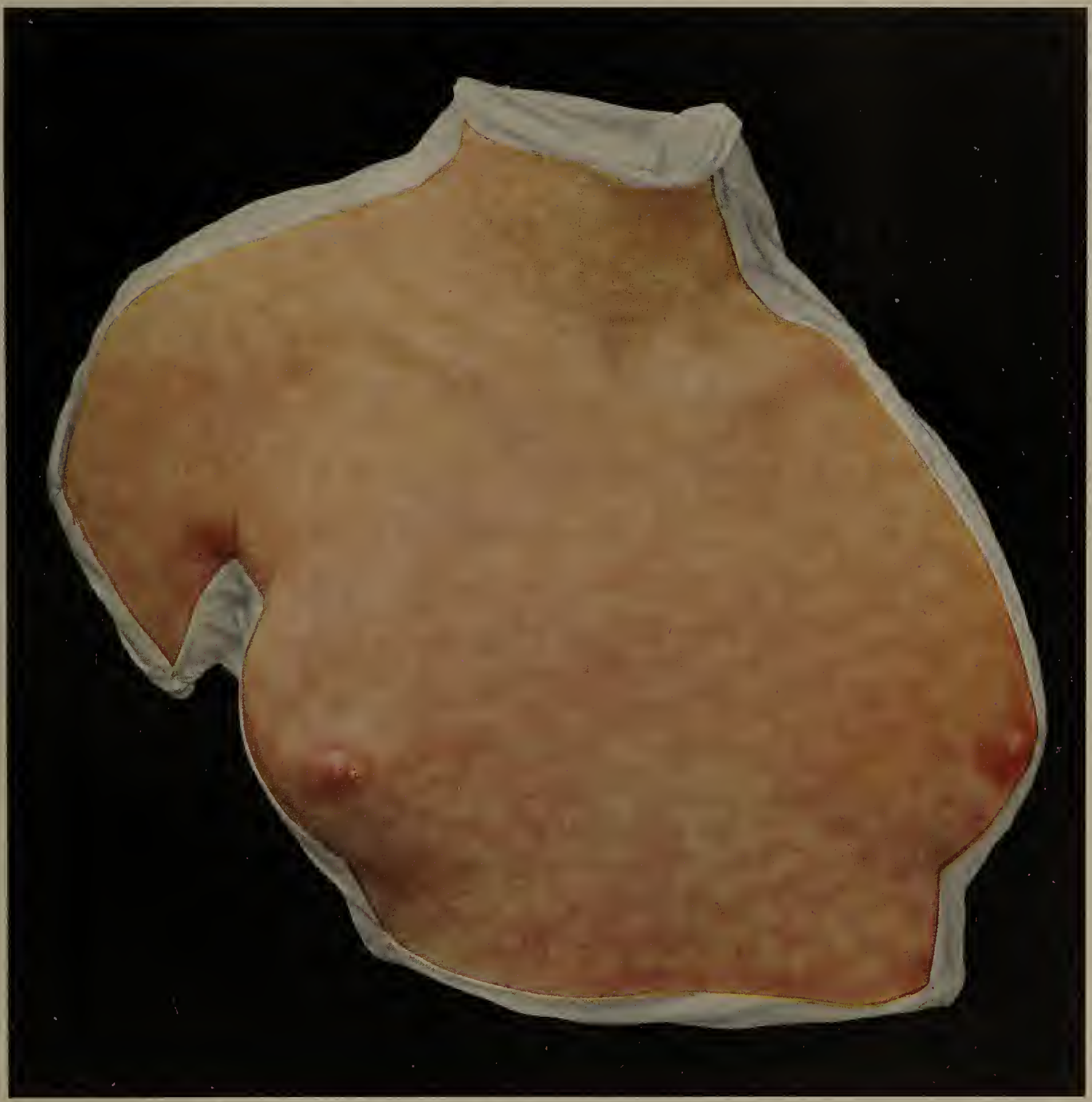


Fig. 252. Syphilis maculosa confluens; Leucoderma

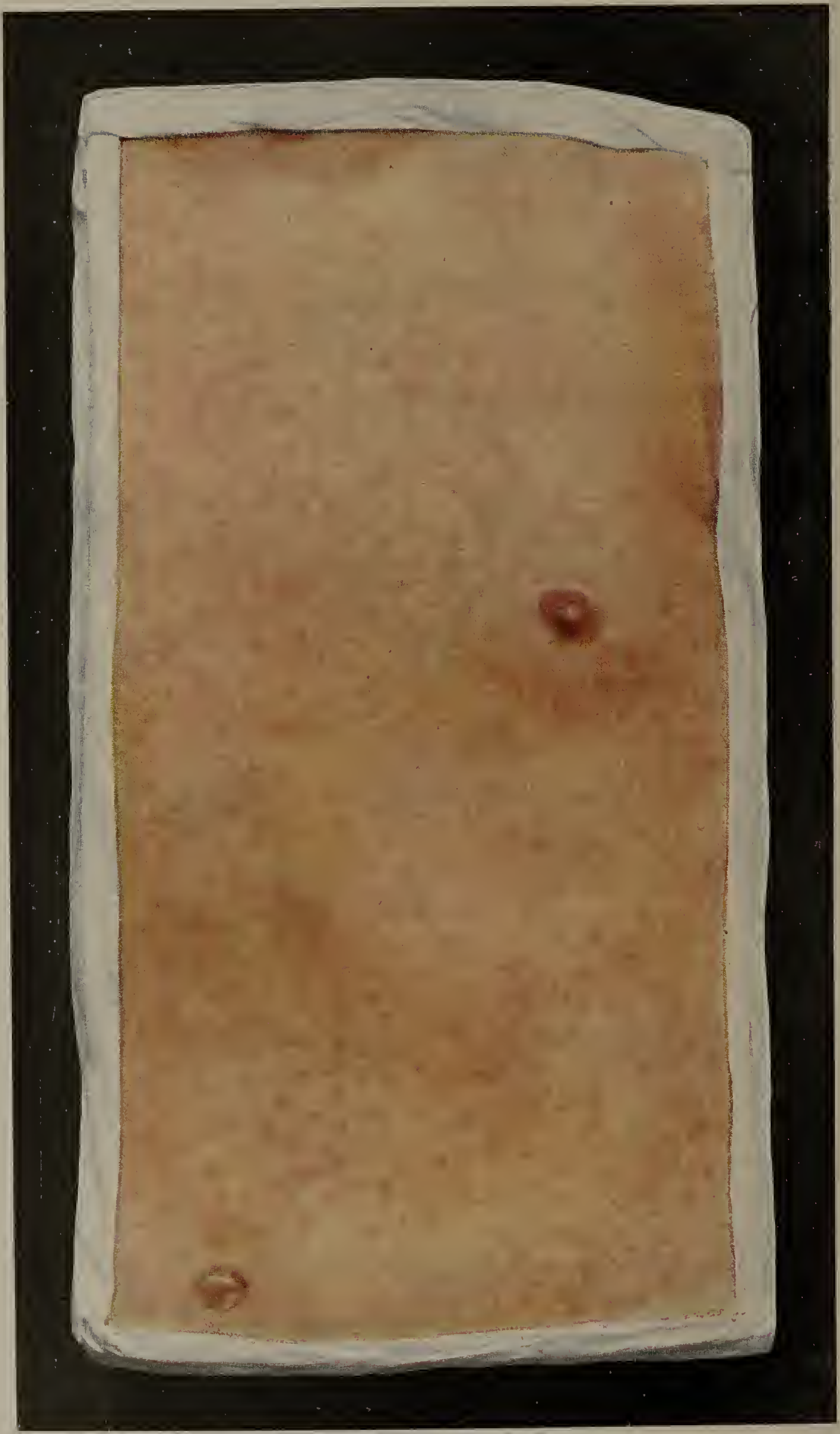


Fig. 253. Syphilis maculosa (Roseola)

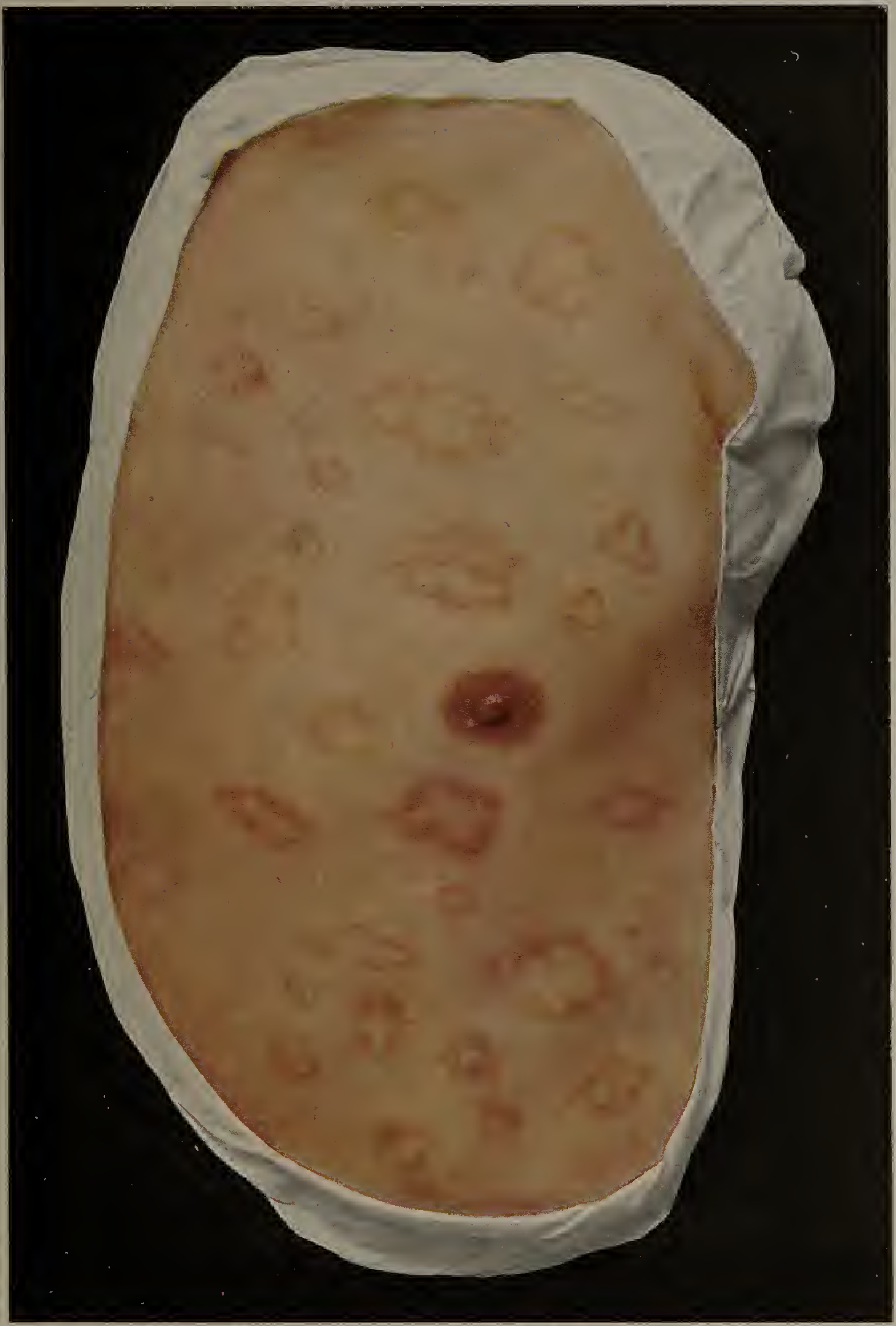


Fig. 254. Syphilis maculosa recidiva (Roseola recidiva)

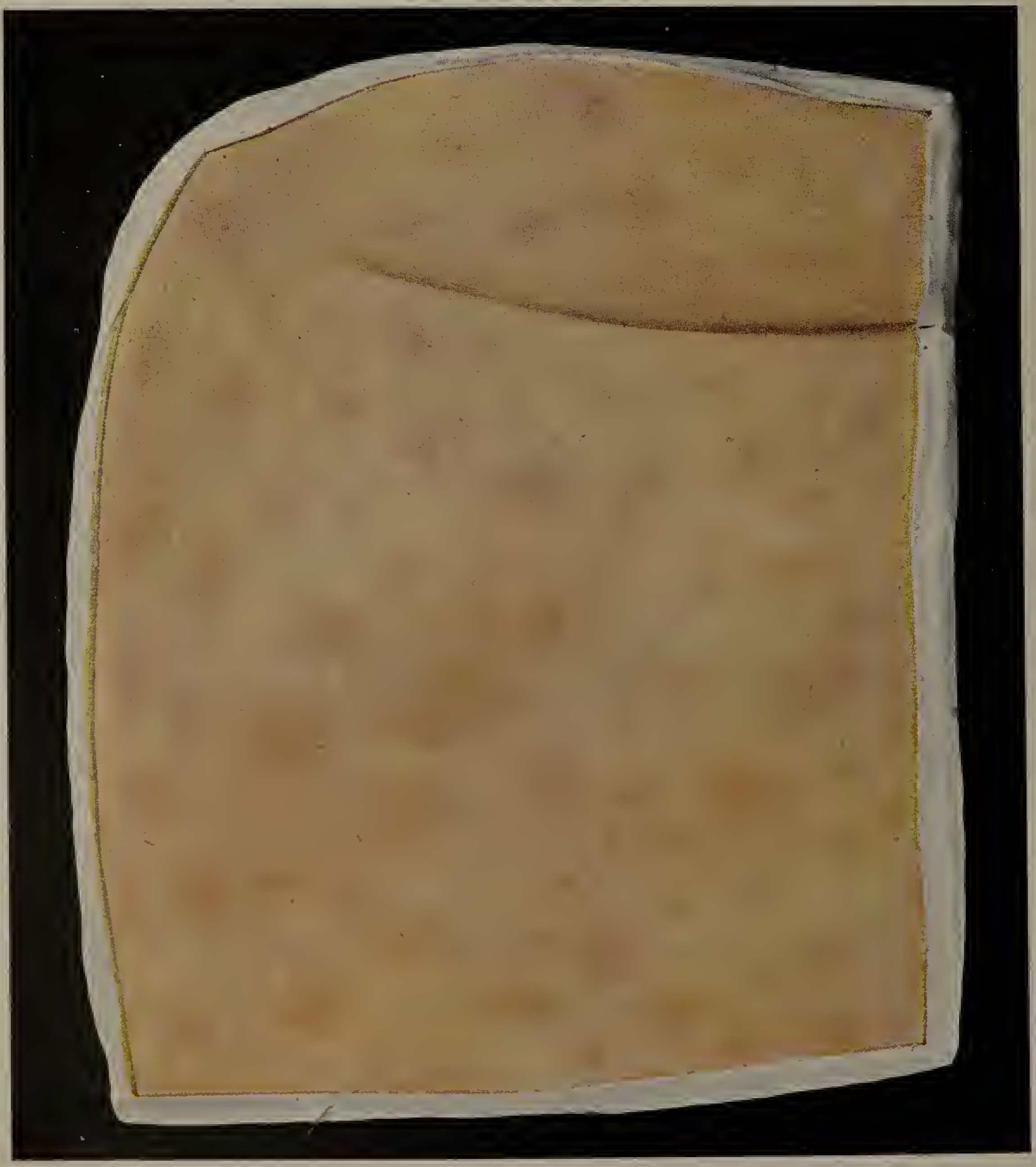


Fig. 255. Syphilis maculosa follicularis

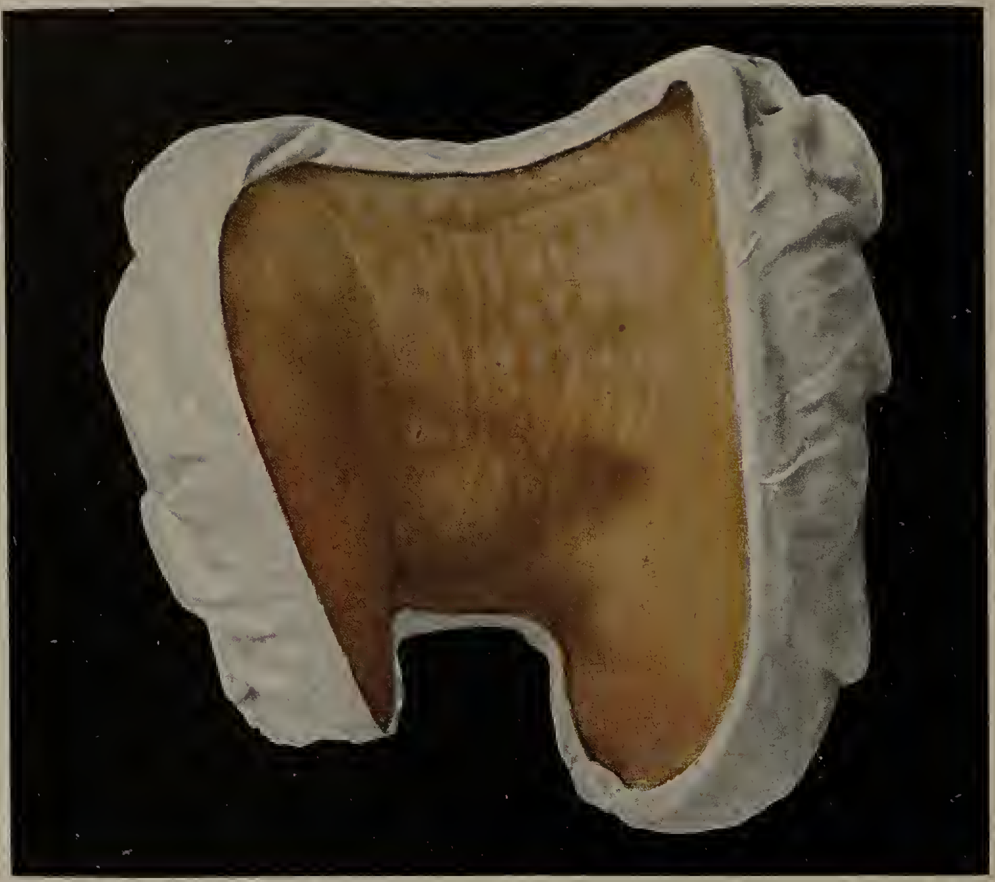


Fig. 256. Leucoderma syphiliticum

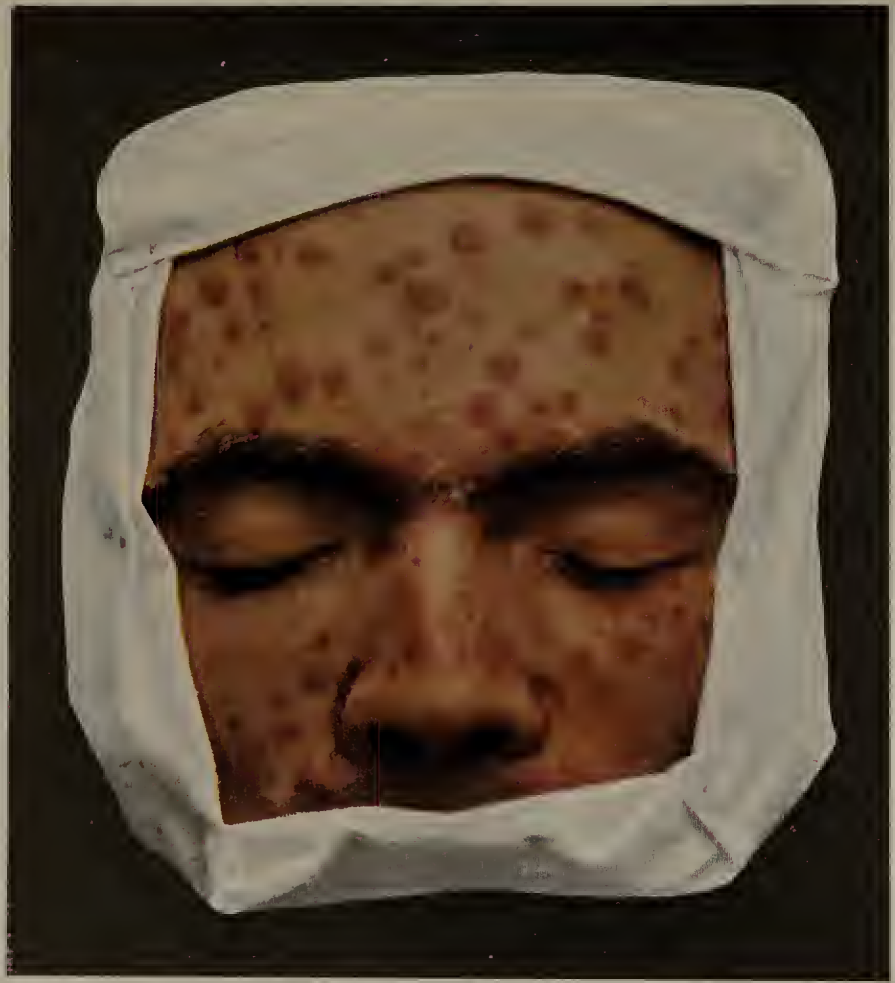


Fig. 257. Syphilis papulosa lenticularis

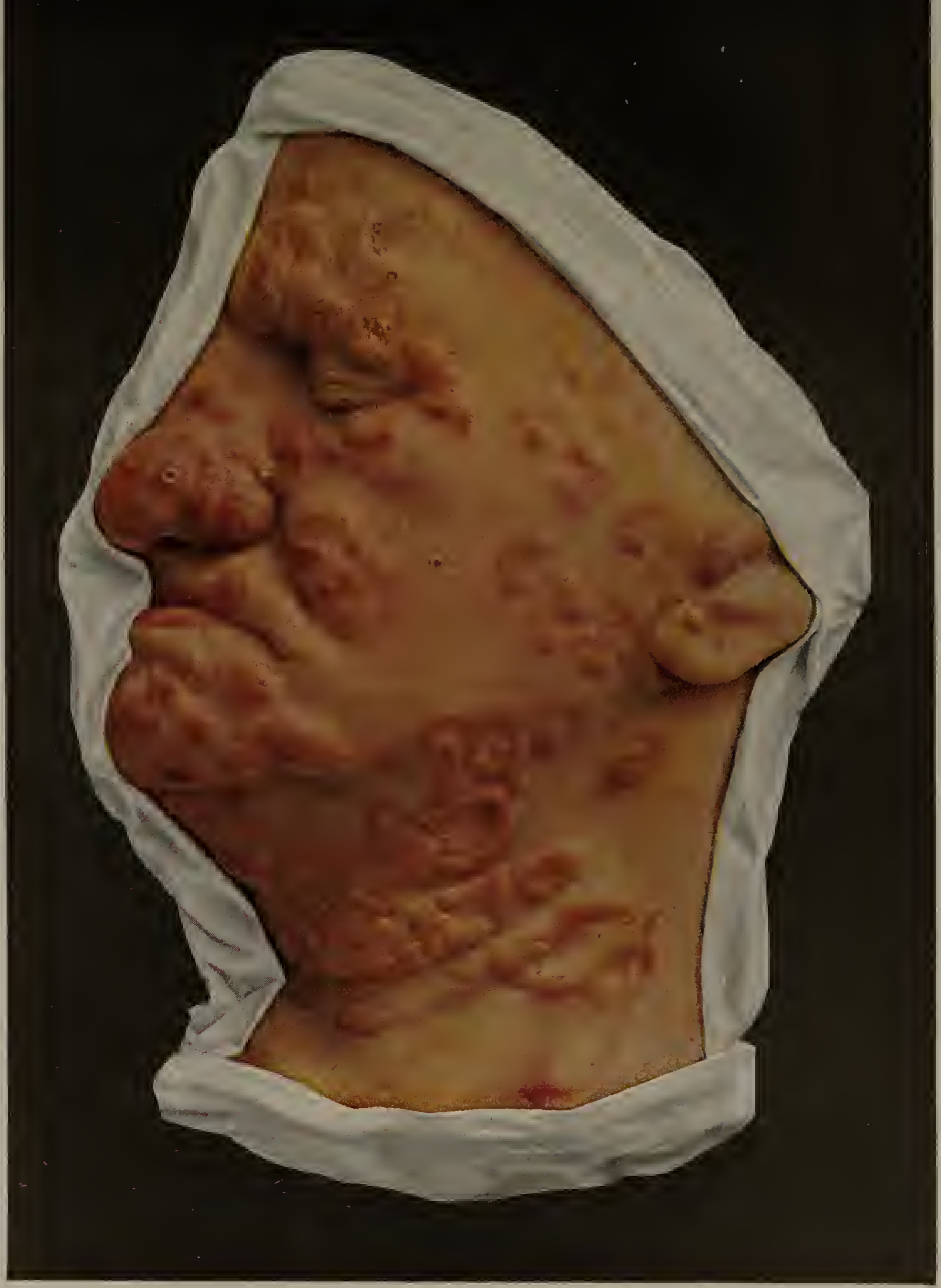


Fig. 258. Syphilis papulosa annularis

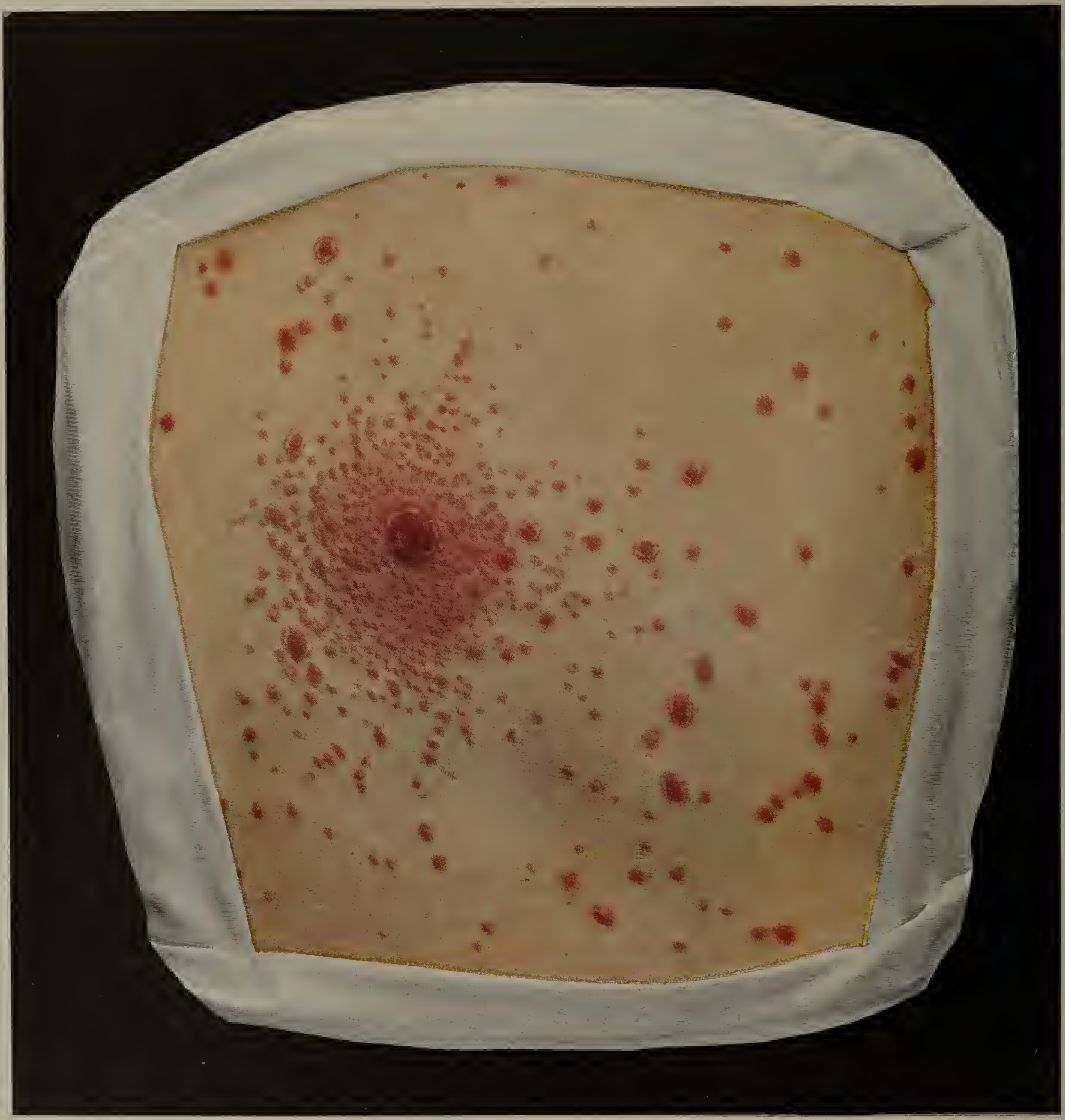


Fig. 259. Syphilis papulosa corymbiformis

but in any case the spots generally disappear in the course of months or years. Some authorities believe that an eruption of this kind indicates an increased liability, in the persons so affected, to late involvement of the central nervous system.

Papular Syphilide (Plates 139 to 143, Figs. 257 to 266)

The secondary papular eruption of syphilis follows the macular, developing either directly on the macular elements or independently of them. Two principal types are met with—the larger lenticular or nummular, and the smaller and rarer follicular papule. The further subdivision of the papular eruptions is based upon the presence of scaling or crusting, or on the manner in which the eruption is grouped or arranged, or on some peculiar mode of formation—for example, in rings. In certain situations where there is warmth and moisture the papule becomes œdematous (condyloma latum).

The common lenticular papule (Fig. 257) is a round or oval elevation the size of the end of a pencil, of a dark red or brown colour. The eruption is usually profuse, and is symmetrically developed over the trunk and limbs; it may also occur on the face, especially the forehead. A marked degree of infiltration is recognised on palpation. The surface may be smooth and glistening, or there may be a certain degree of scaling, either over the surface generally, or around the papule, forming the collarette of Biett. The degree of scale formation may occasionally be considerable, constituting one form of the so-called psoriasiform syphilide. In the nummular form the papules are larger and coin-shaped, and are especially prone to become crusted. The annular or circinate syphilide occurs especially on the face or neck in the form of complete or broken rings (Fig. 258). There is a well-marked red infiltrated margin, sometimes made up of individual papules closely set together. Finer forms of this eruption may be seen at the sides of the mouth or nose, occasionally in concentric formation (Figs. 263 and 264). These ringed eruptions, when they are present, are characteristic of syphilis. In the corymbose syphilide (Fig. 259) a number of smaller elements are grouped round a larger central papule. This form of eruption occurs especially on the back; it is very well represented in the illustration, where, in addition, many of the outlying papules are also shown with a collarette of Biett.

Sometimes the central papule in a corymbose group is separated from its satellites by a well-marked area of clear skin. In the small papular, miliary or follicular syphilide the individual lesions are about the size of a pin's head, are of a reddish colour, and are localised in the orifices of the hair follicles. This eruption is generally of later development and distinctly rarer than the lenticular, with which it may be mixed. The lesions are sometimes widely distributed and numerous, or may be comparatively few in number; in both cases they show a decided tendency to form into groups (Fig. 262). In certain cases the lesions are capped with a tiny scale or develop an apical vesicle or pustule, constituting the so-called acneiform, herpetiform, and varicelliform syphilides.

Palmar and Plantar Syphilides (Plate 143, Figs. 265 and 266)

A macular, or a squamous, syphilide is not very uncommon on the palms and soles during the secondary period. The eruption usually assumes the form of brownish-red macules or papulo-squamous lesions, the scaling being often limited to a fringe about the slightly-raised spots (Figs. 265 and 266). This form of eruption sometimes coincides with a relapse of the disease in imperfectly treated patients. It is always symmetrical, and may affect both the palms and soles at the same time, and corresponds with the macular or papular eruption of the secondary period.

Pustular Syphilide (Plates 144 and 145, Figs. 267 to 270)

The pustular syphilides are the result of a special deformity of the papular elements, and are therefore more accurately described as a papulo-pustule. They are comparatively uncommon and, when they occur, are often mixed with other types of lesion in the polymorphous eruption. The larger, or impetiginous, variety develops from the nummular papule, the surface of which becomes moist and eroded and covered with a dirty brownish-yellow crust, beneath which purulent matter accumulates (Fig. 267). The smaller papulo-pustular (varicelliform) type is less rare, and forms by contrast on the smaller papules. The pustule may be preceded by a vesicle or evolve rapidly without any obvious antecedent vesicular stage (Fig. 268). The rash may in some cases be extensive and the elements numerous, as in the papulo-pustular or papulo-crustate eruptions derived from the lenticular syphilide (Figs. 269 and 270). The so-called pustular syphilide is thus merely a variant of the papular eruption.

In the malignant form of secondary syphilis termed "rupia" (Fig. 281) a completely different series of changes occur. This con-

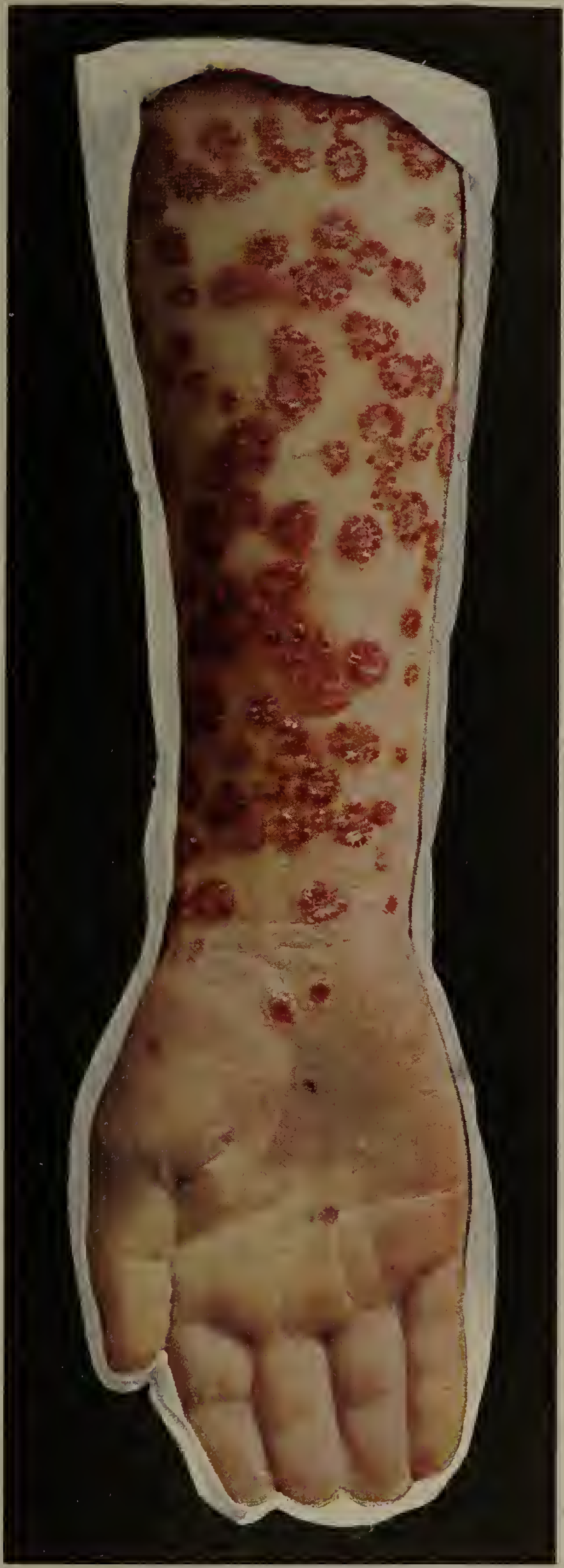


Fig. 260. Syphilis papulosa orbicularis

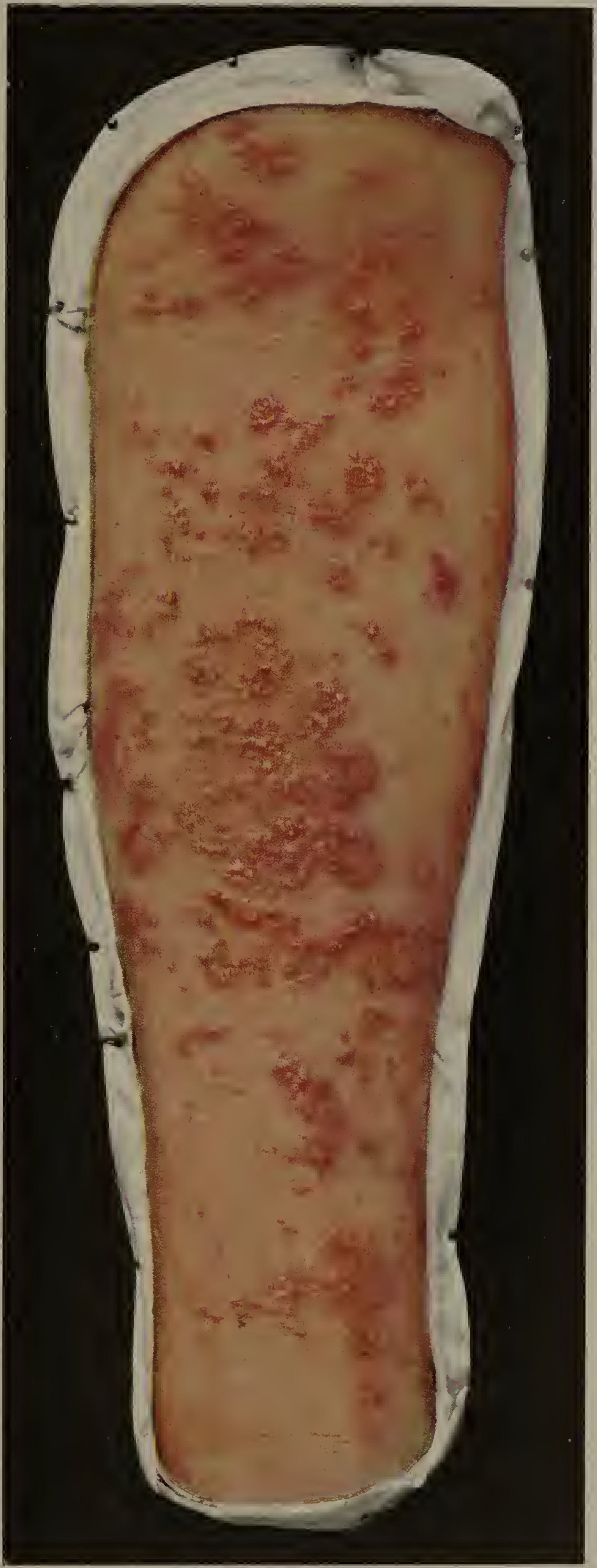


Fig. 261. Syphilis papulosa miliaris (lichenoides)

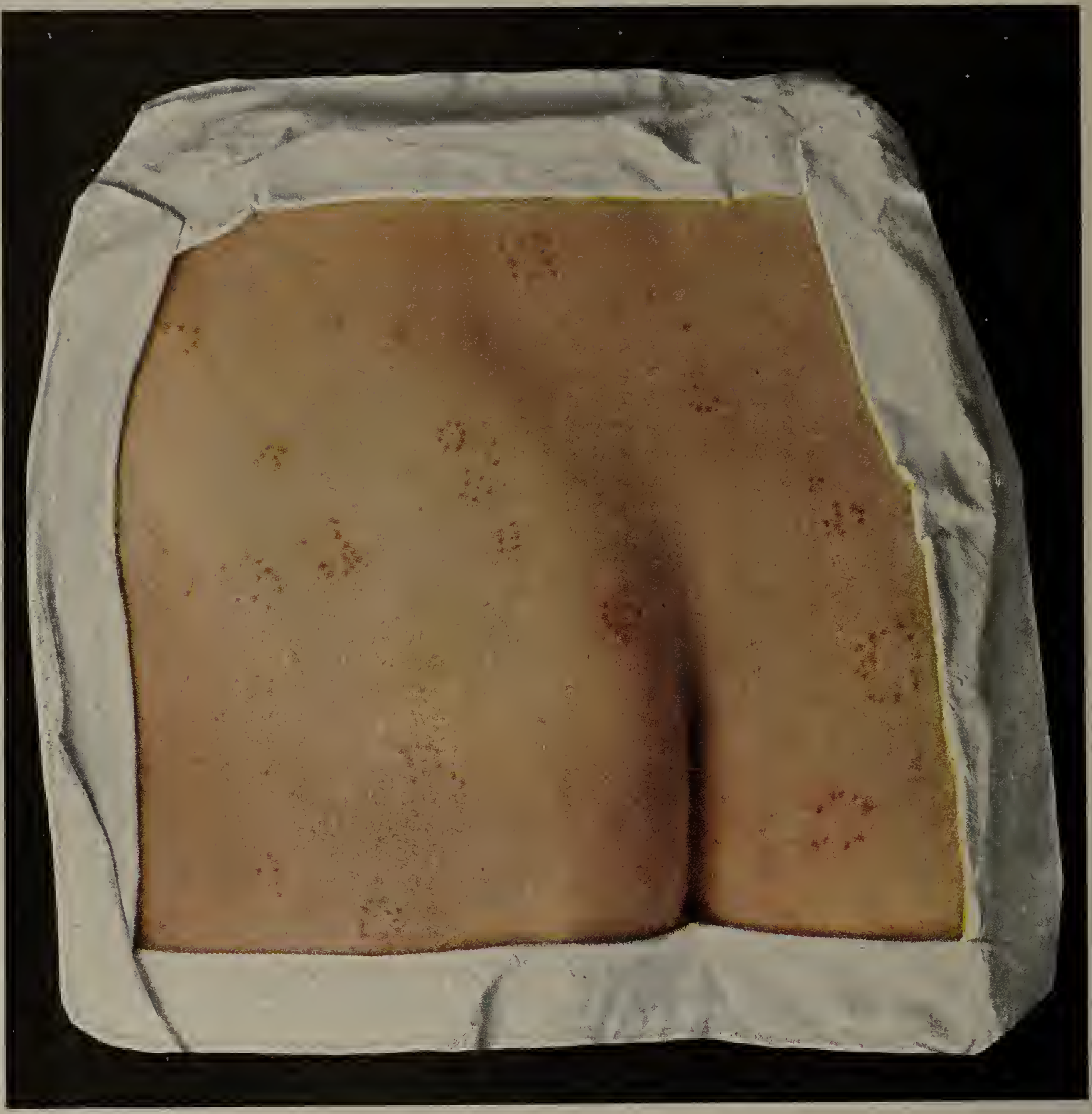


Fig. 262. Syphilis papulosa miliaris (lichenoides)

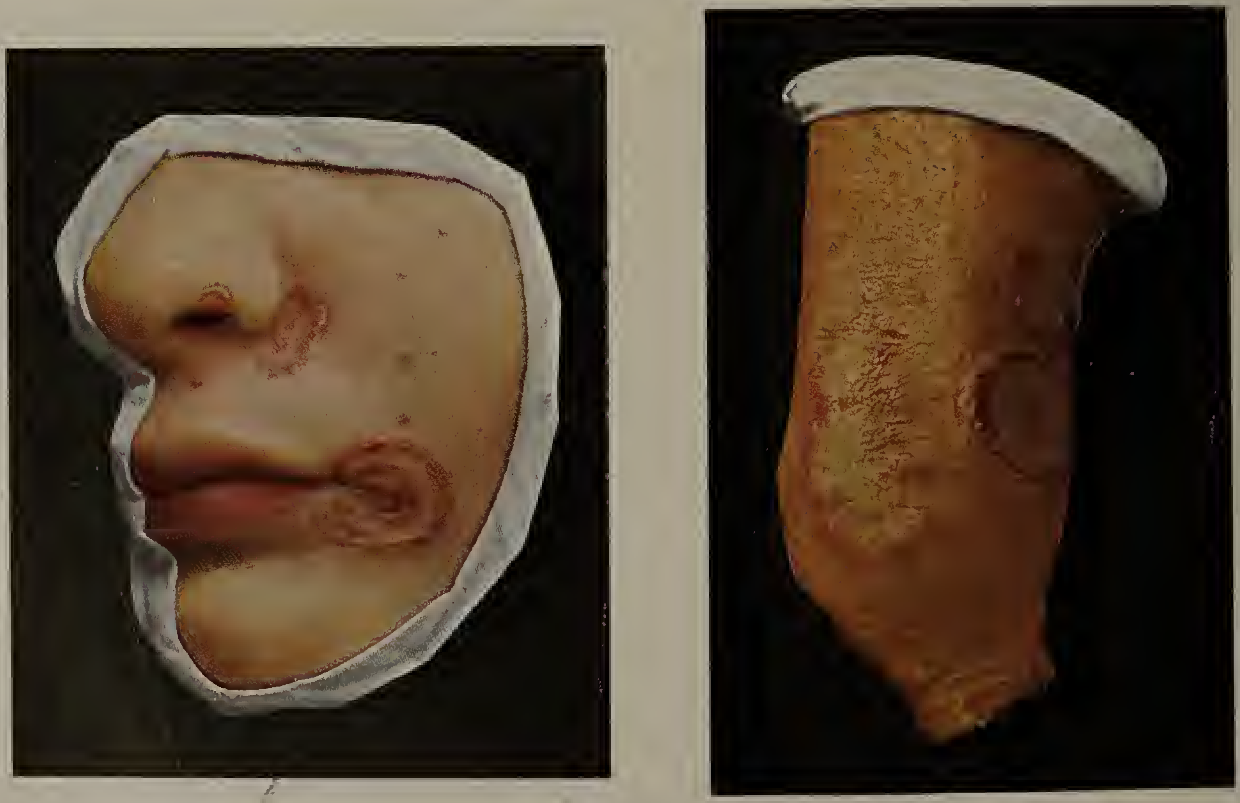


Fig. 263 and 264. Syphilis papulosa circinata

Plate 143

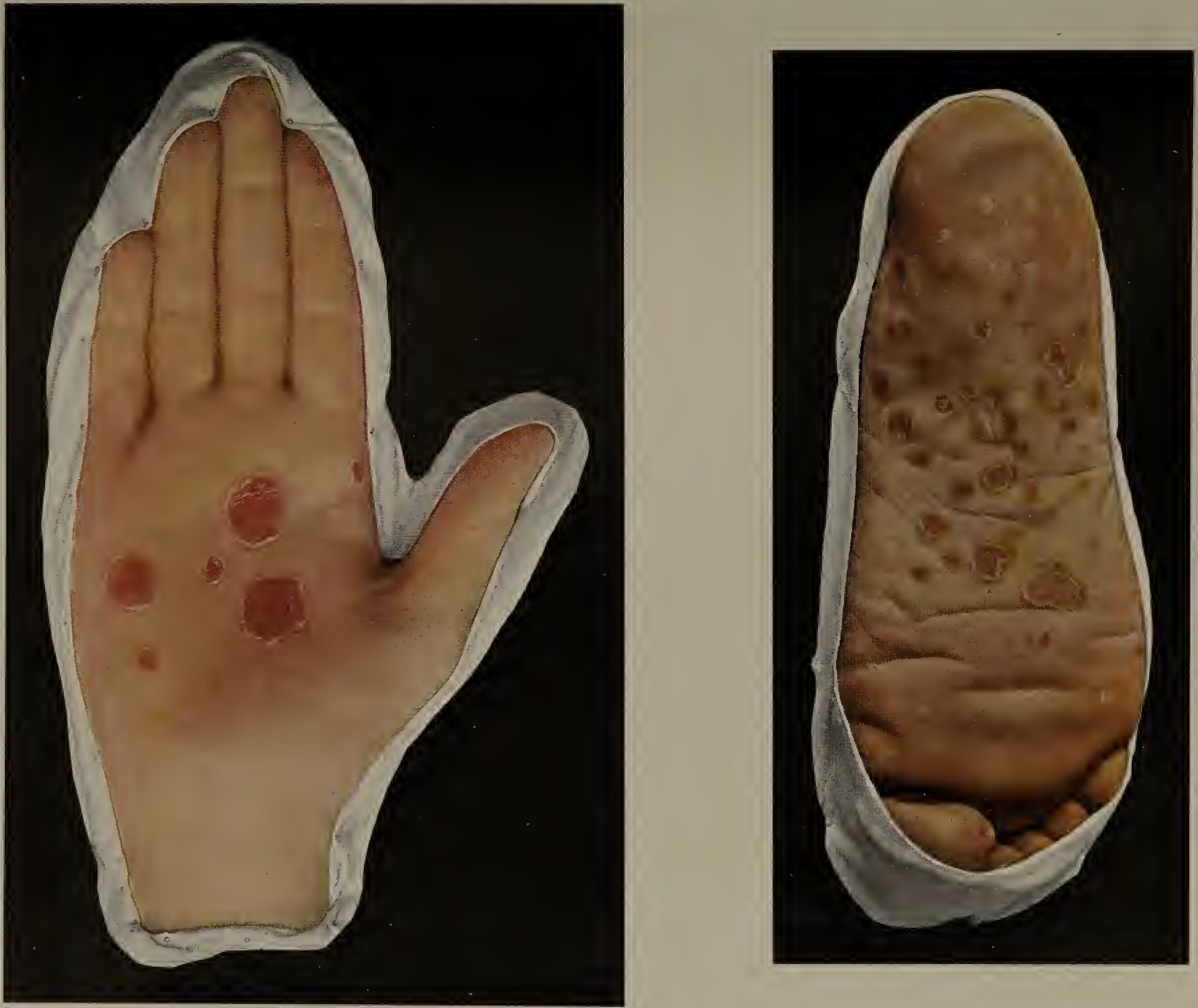


Fig. 265 and 266. Syphilis papulo-squamosa

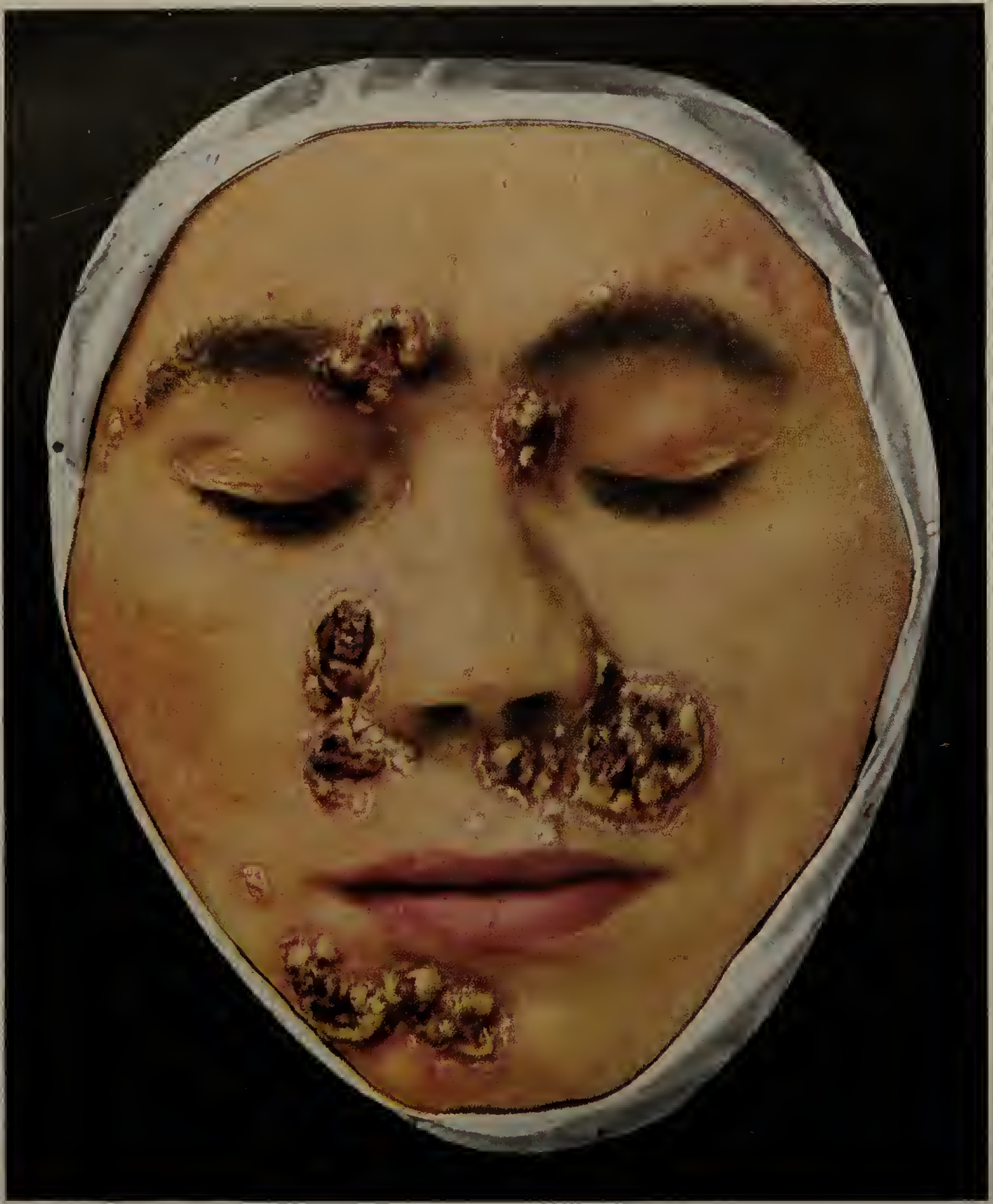


Fig. 267. Syphilis papulo-pustulosa (impetiginosa)

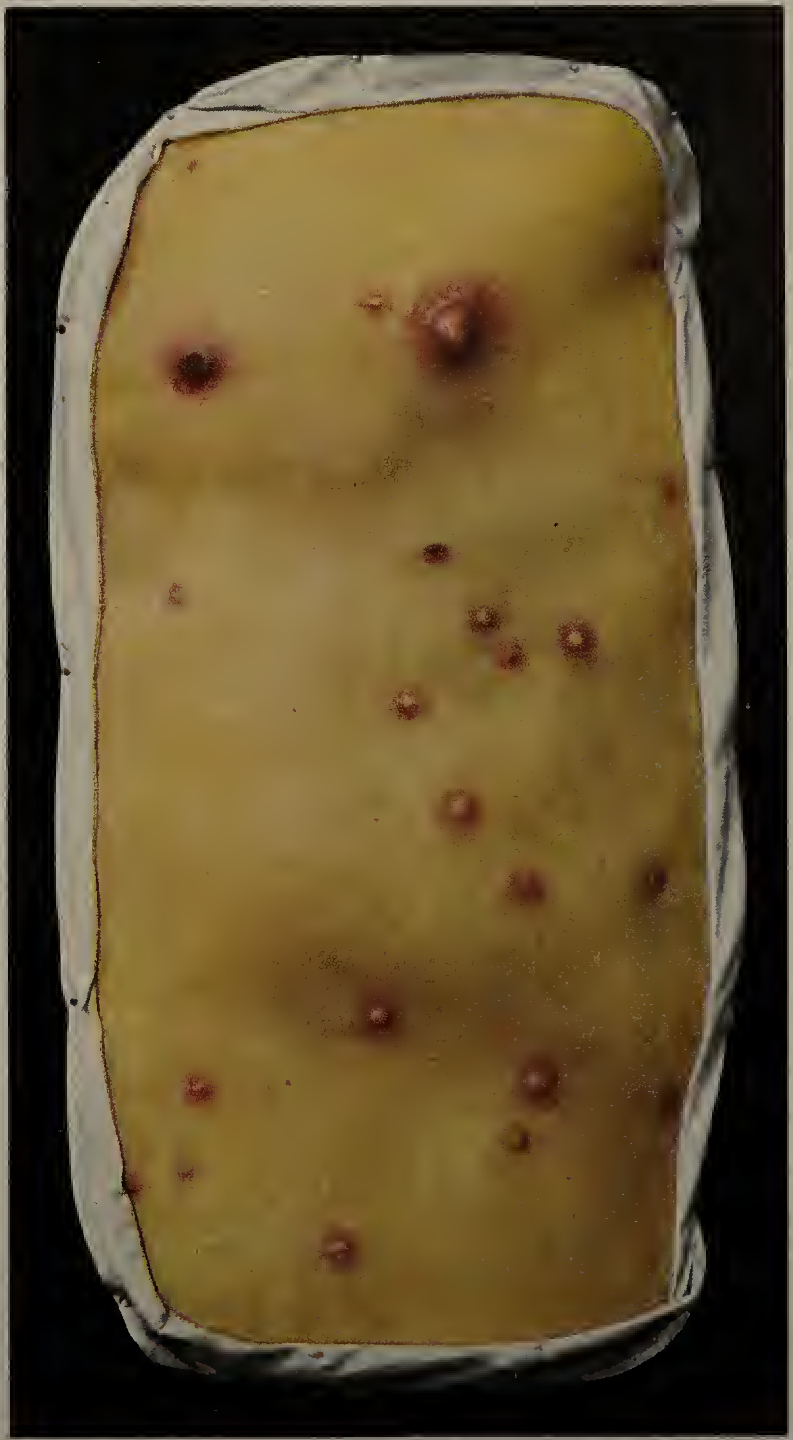
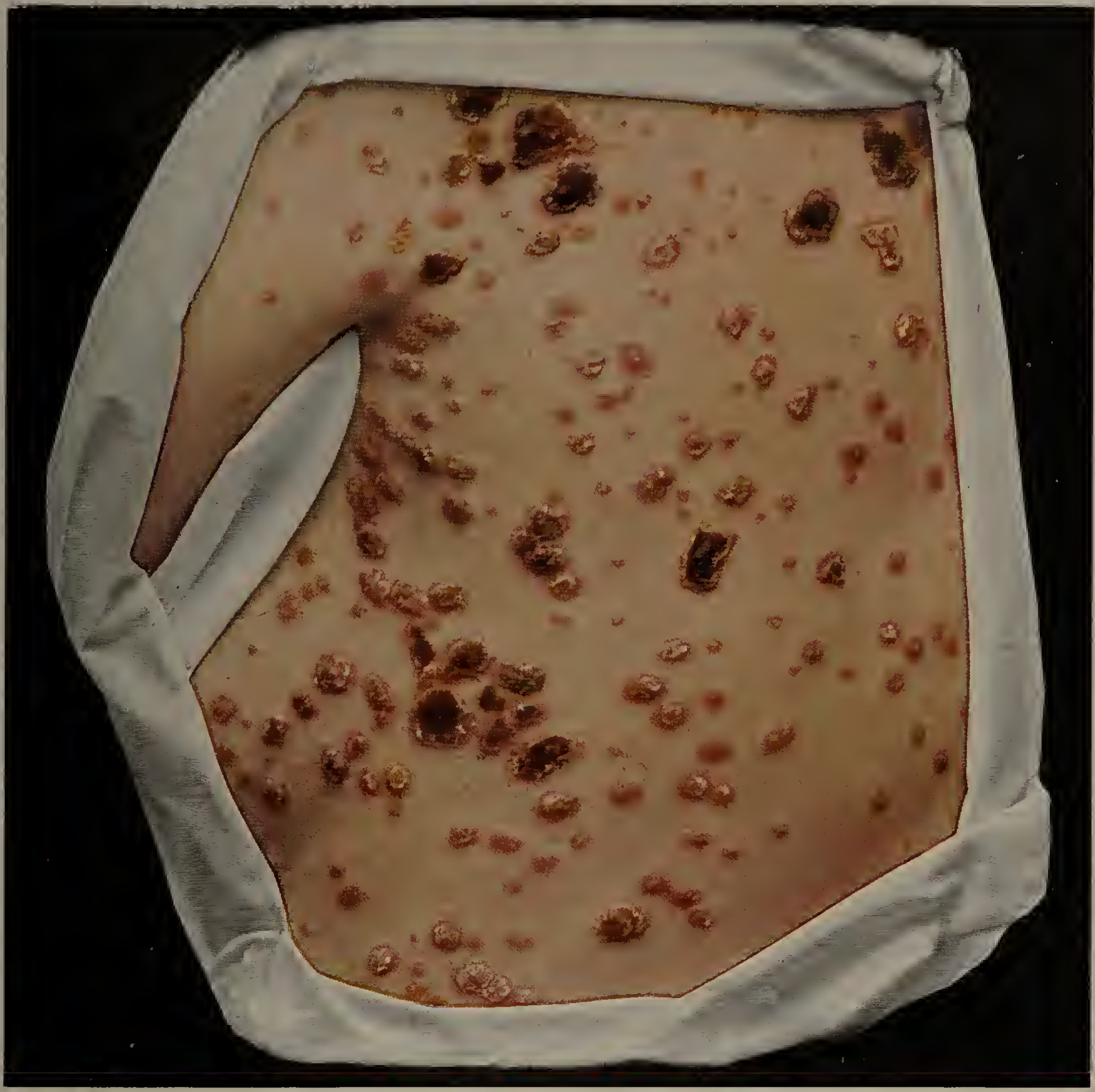


Fig. 268. Syphilis papulo-pustulosa
(varicelliformis)



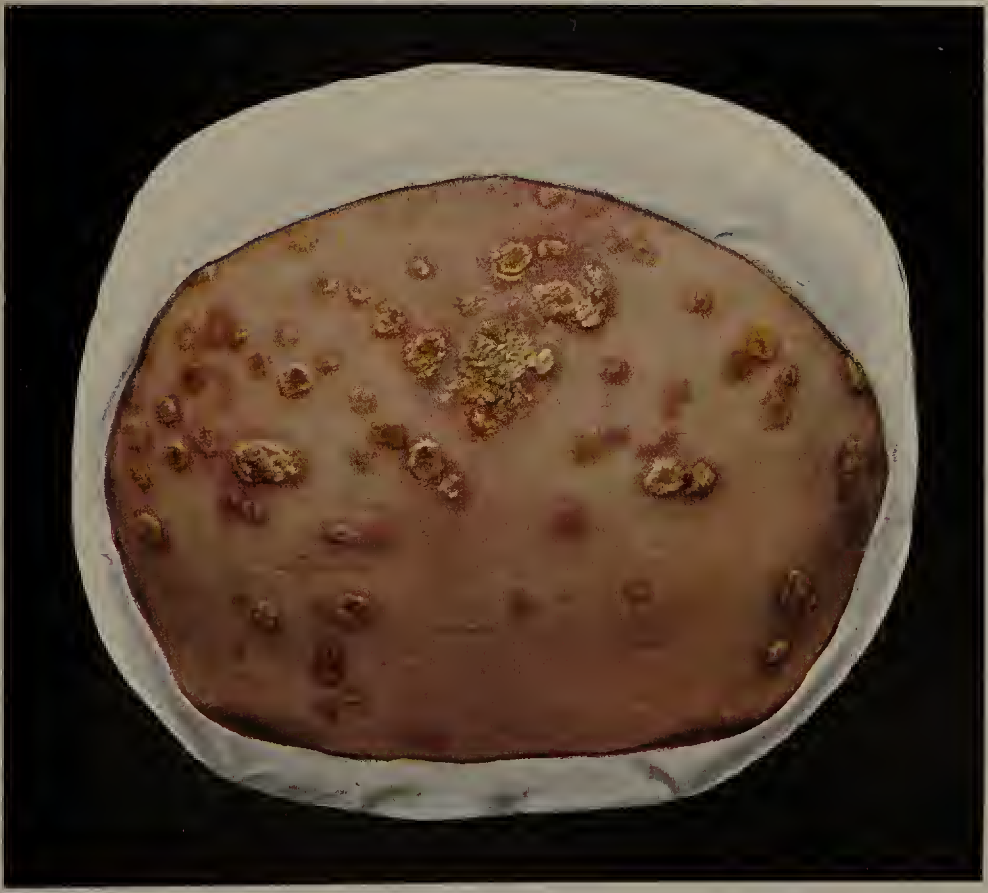


Fig. 269 and 270. Syphilis papulo-pustulosa

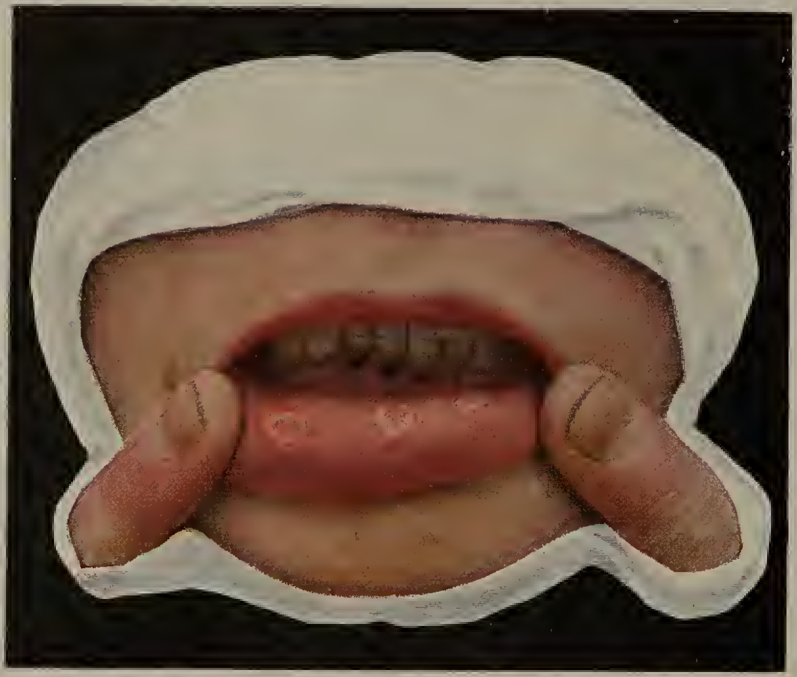


Fig. 271. Syphilis papulosa mucosae oris (labii inferioris)

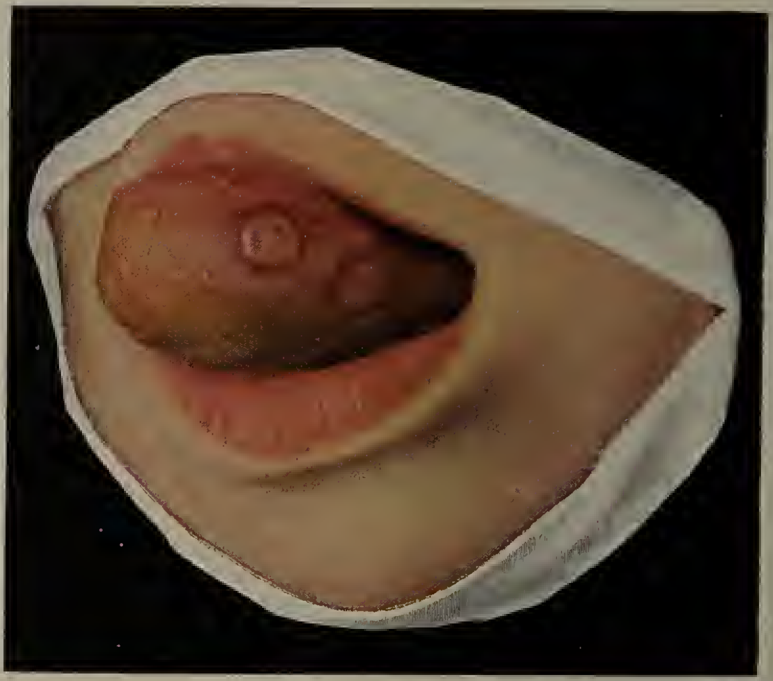


Fig. 272. Syphilis papulosa linguae

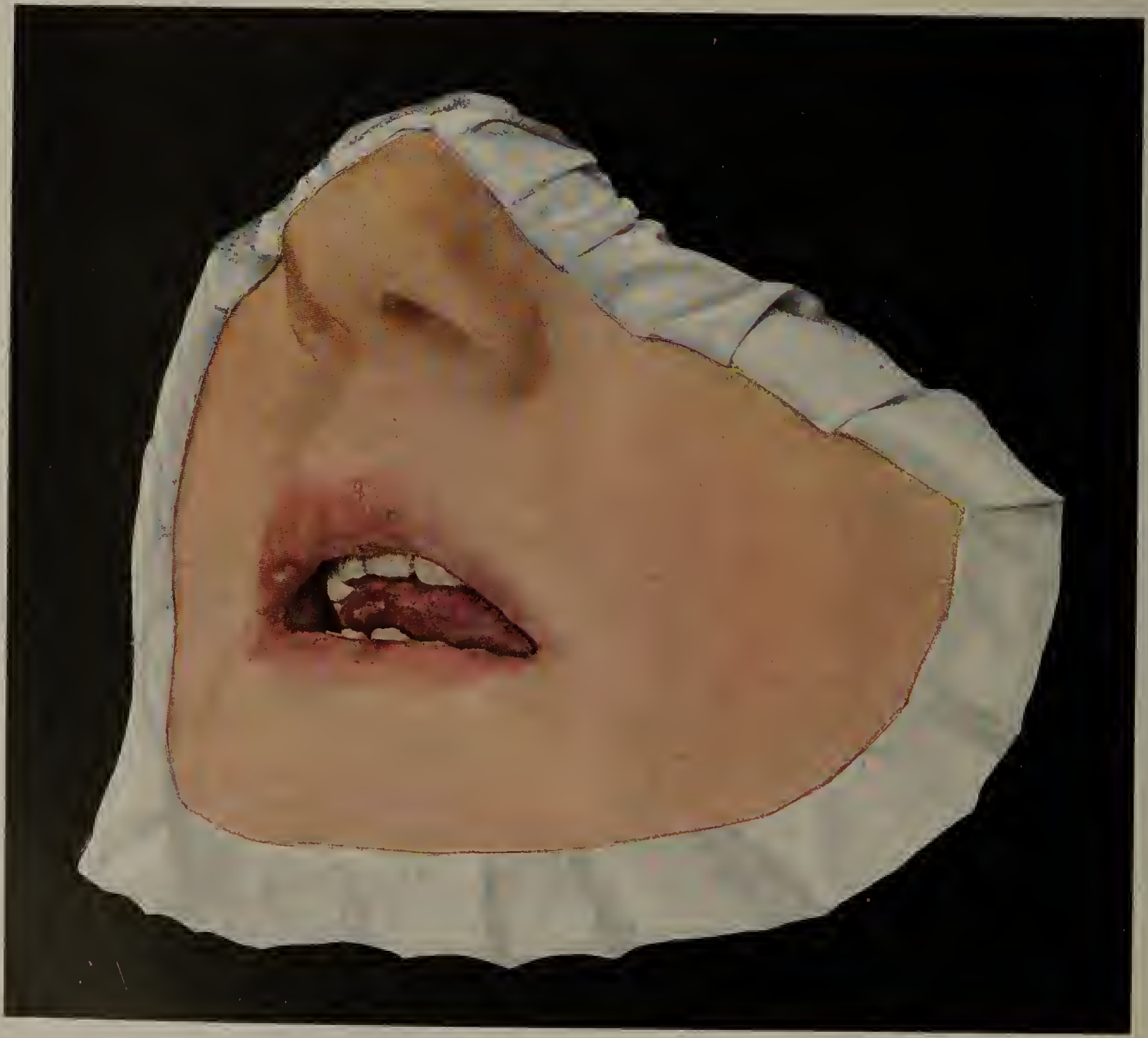


Fig. 273. Syphilis papulosa mucosae oris (labii superioris et linguae)

dition is met with in debilitated subjects; there is a definite ulceration of the skin, upon which the discharge dries and becomes heaped up in a form resembling a limpet shell. This condition is among the rarest of syphilitic manifestations, and is now hardly ever seen.

Diagnosis

The papulo-squamous syphilide in its various forms has to be distinguished from a number of non-syphilitic eruptions which it imitates. As a rule, although this is not invariable, the secondary syphilide is polymorphous, and this and the absence of itching are important diagnostic features. Further, although the eruption is often so definite that a diagnosis can be made from it alone, in all cases confirmatory evidence should be sought for in the general enlargement of the lymphatic glands and in the characteristic lesions of the mucous membrane of the throat and mouth. In other cases, where the rash is badly developed, condylomata may be found in the peri-anal region or about the vulva, serving to establish an otherwise doubtful diagnosis. The Wassermann reaction is almost always positive in the secondary stage, and, while a positive result is not absolute evidence of the nature of a suspected rash (for it only implies that the patient has been at some near or remote date infected with syphilis), a negative result should always warn the observer that he may be mistaken in his diagnosis.

Psoriasis is distinguished from the papulo-squamous syphilide by its history, and by its tendency to develop on extensor surfaces and on the scalp. The scale in psoriasis is peculiarly silvery, and its removal exposes a flat, glistening, red, macular spot, which bleeds very easily on light scratching. The eruption of lichen planus is sometimes confused with secondary syphilis, from which it differs in its itchy character and in the angular and burnished form of the papules and in their lilac tint. It should be remembered that both diseases may affect the buccal and other mucous membranes. The follicular form of seborrhœa corporis is not unlike the small papular or follicular syphilide, and may even be grouped in a suggestive manner. The accompanying manifestations of syphilis are absent and, further, this seborrhoide tends to form greasy erythemato-squamous discs over the presternal and interscapular regions, features which distinguish it from the somewhat similar syphilide.

Mucous Membranes

During the secondary period lesions of the mucous surfaces are very common, and are therefore of considerable diagnostic importance. They are highly contagious, and may be, and not infrequently are, the means of conveying disease to others, either directly or indirectly. The forms assumed by these mucous patches are various; they may appear as simple erosions or as flat, slightly elevated, papules, or, in rare cases, as considerable ulcerated areas. They occur in the oral regions and also on the mucous surfaces of the genitalia in both sexes, where they may be mistaken for multiple primary sores. Local irritation appears to have a determining effect, and smoking certainly aggravates the lesions in the mouth. On the lips, especially the lower lip, multiple round erosions, or papulo-erosive lesions, may appear, sometimes covered with a gray opaline membrane (Figs. 271 and 273). Similar eruptive forms are occasionally met with on the tongue, but the most characteristic eruption in this situation is the " bald patch " appearing in the later stage of the secondary phase as one or more smooth, circular areas on the dorsal surface. The tongue is also liable to become fissured, especially on its lateral aspects.

On the fauces the secondary eruption may be limited to one or more small patches, or may be very extensive, involving both tonsils, the velum palati and its pillars. Flat opaline patches of round or irregular form may be observed, or there may be slightly elevated papules (Fig. 276); other cases are accompanied by a diphtheroid membrane, or even ulceration, or the throat may exhibit no more than a catarrhal redness. The throat may be painful, an exception to the general rule that syphilitic lesions are free from subjective sensations.

Diagnosis

Lesions of the mucous membranes most often serve the purpose of confirming the diagnosis of syphilis in other situations, although in exceptional cases the patient may first seek advice for the condition of the mouth or throat. In such circumstances a search should be made for the characteristic rash and other signs of the disease; it is important to remember that an unusual manifestation in the mouth or throat may be syphilitic, and that this can often be confirmed or excluded by a general examination of the patient and a Wassermann test. Aphthæ are of all conditions the most likely to cause confusion; their painful and evanescent character and acute nature are usually sufficient to distinguish them, but in any case the other signs and symptoms of syphilis are wanting (Figs. 274 and 275). Certain other

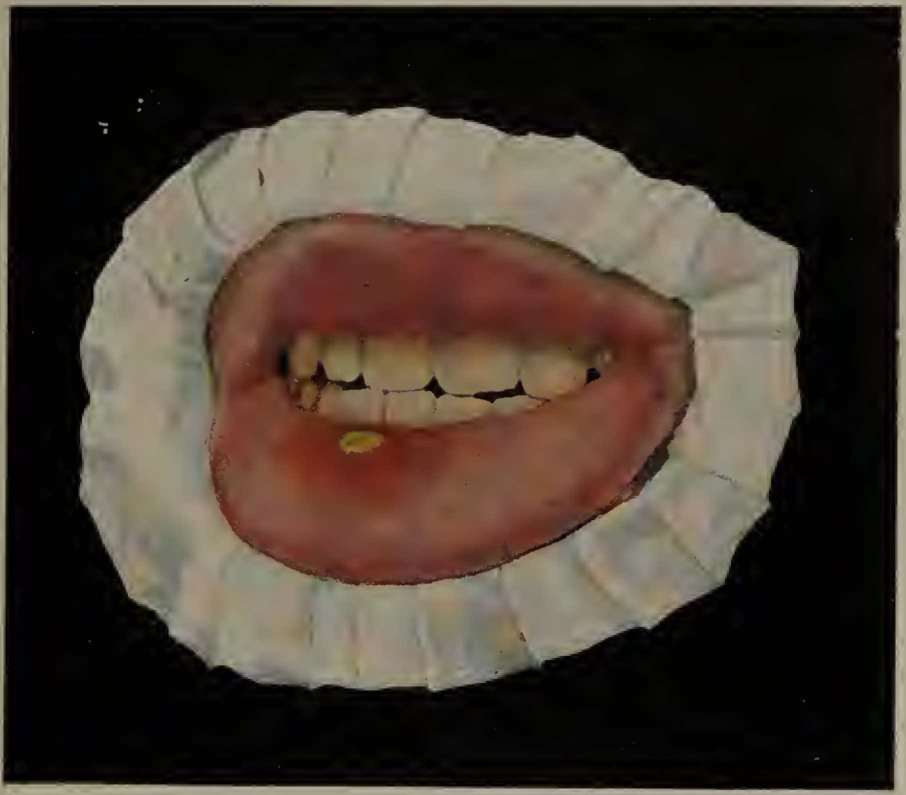


Fig. 274. Ulcus aphthosum labii inferioris

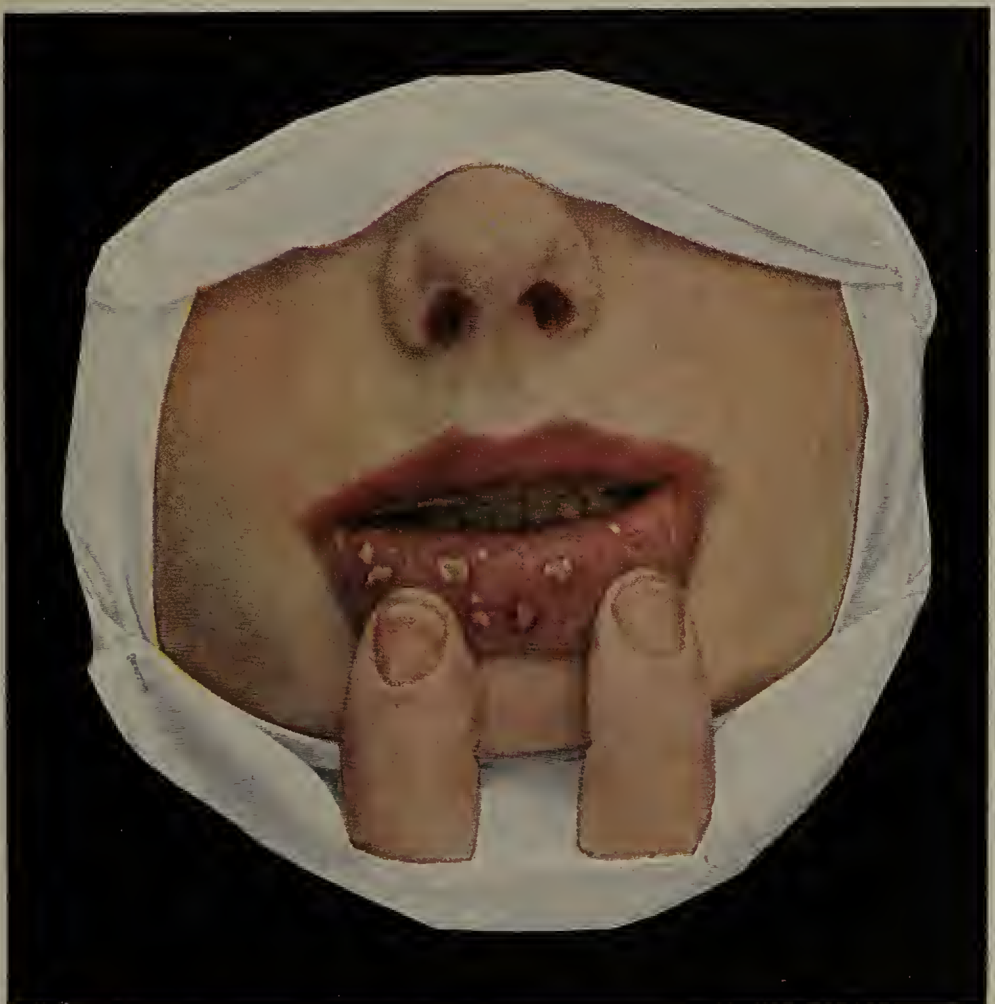


Fig. 275. Aphthae

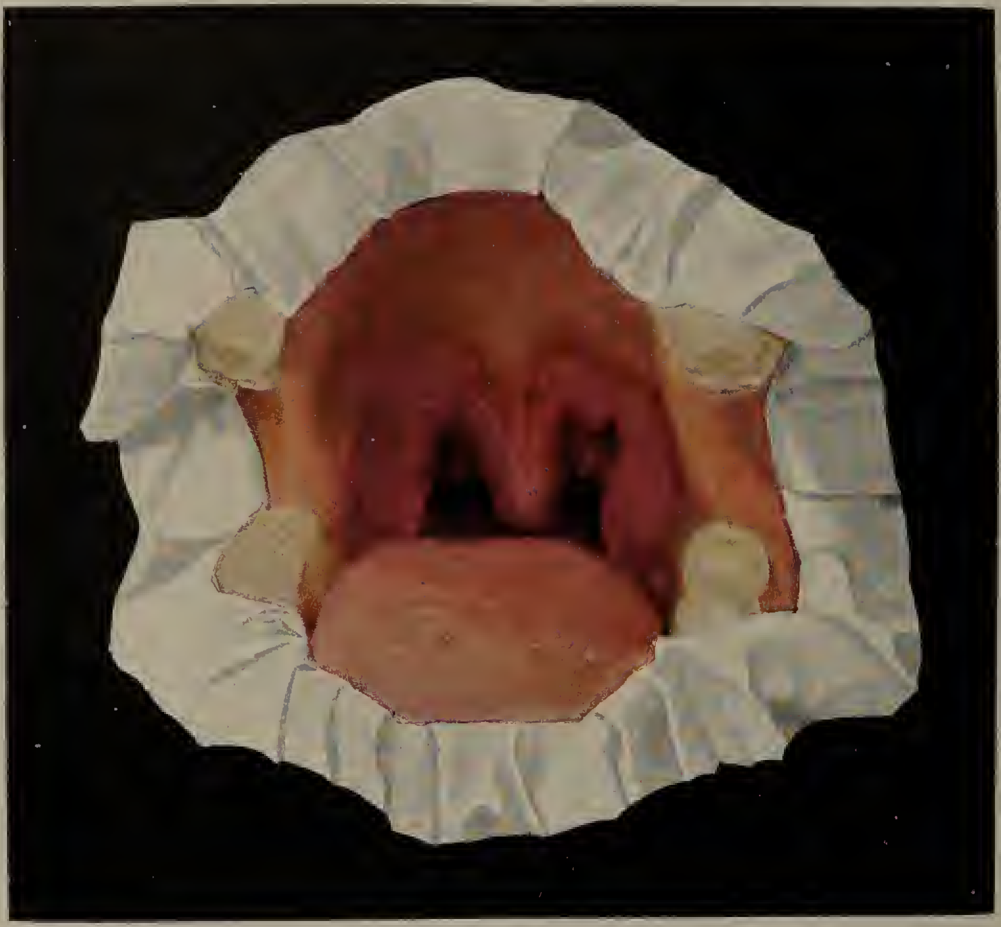


Fig. 276. Syphilis papulosa palati mollis et uvulae

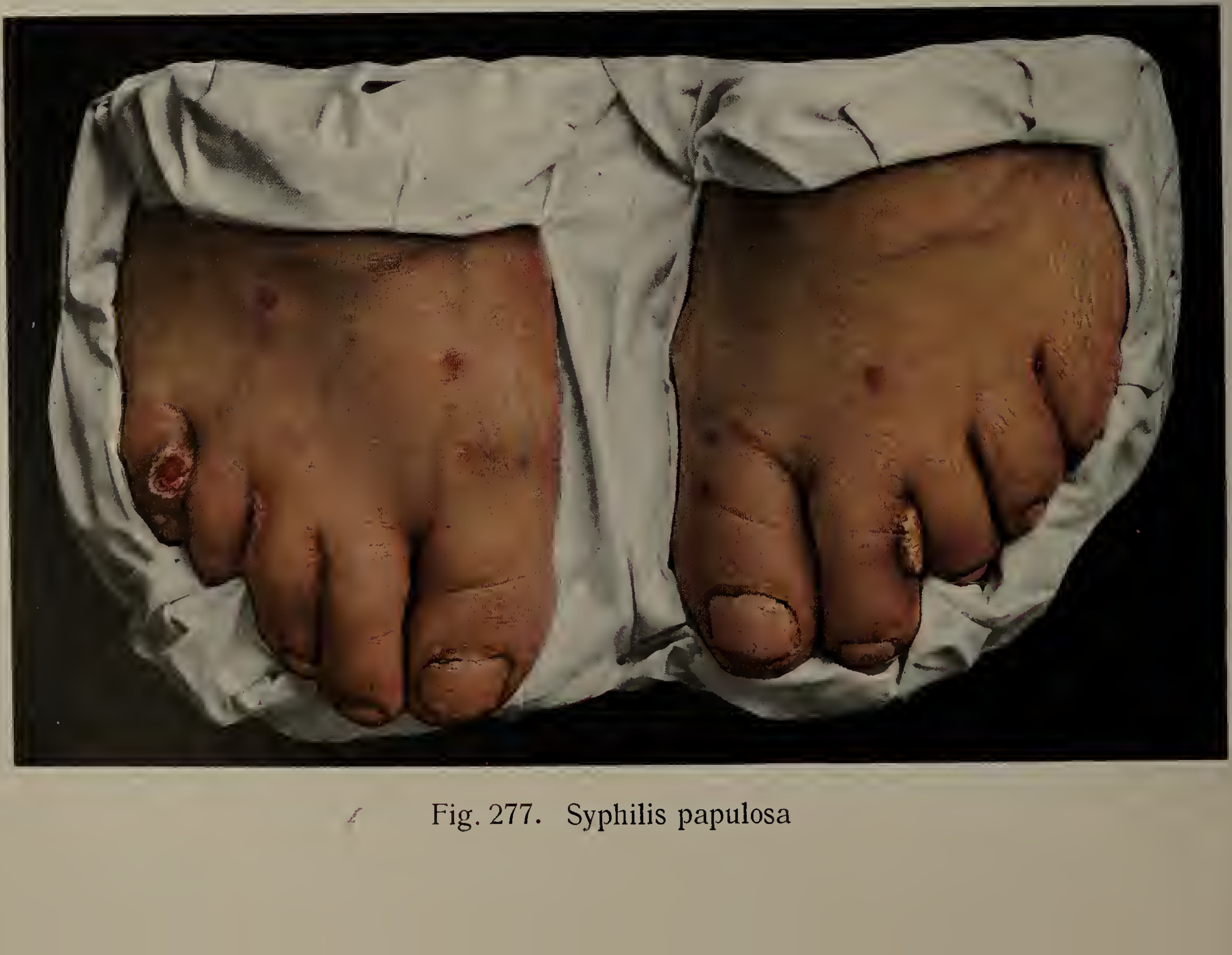


Fig. 277. Syphilis papulosa

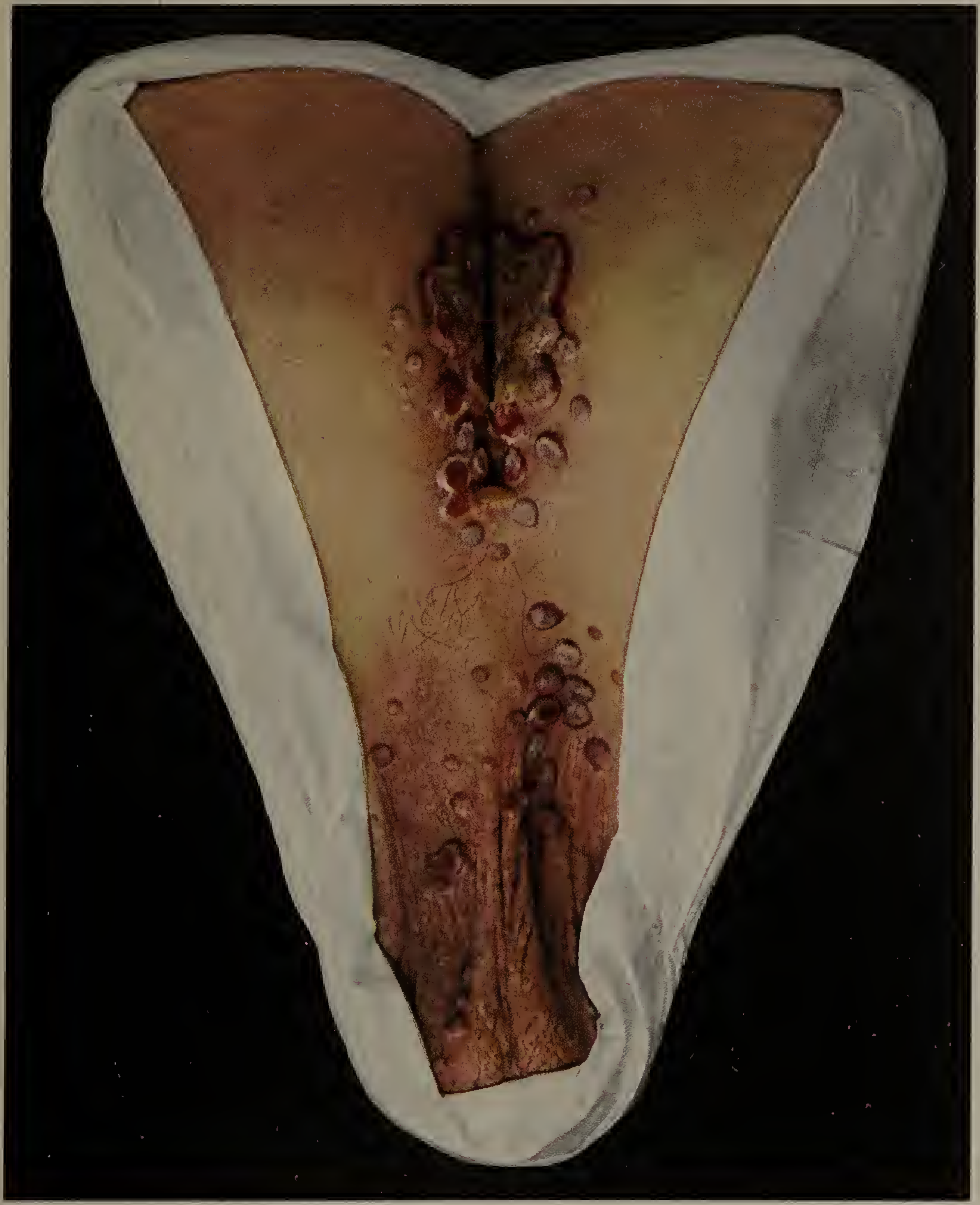


Fig. 278. Syphilis papulosa (Condylomata lata)

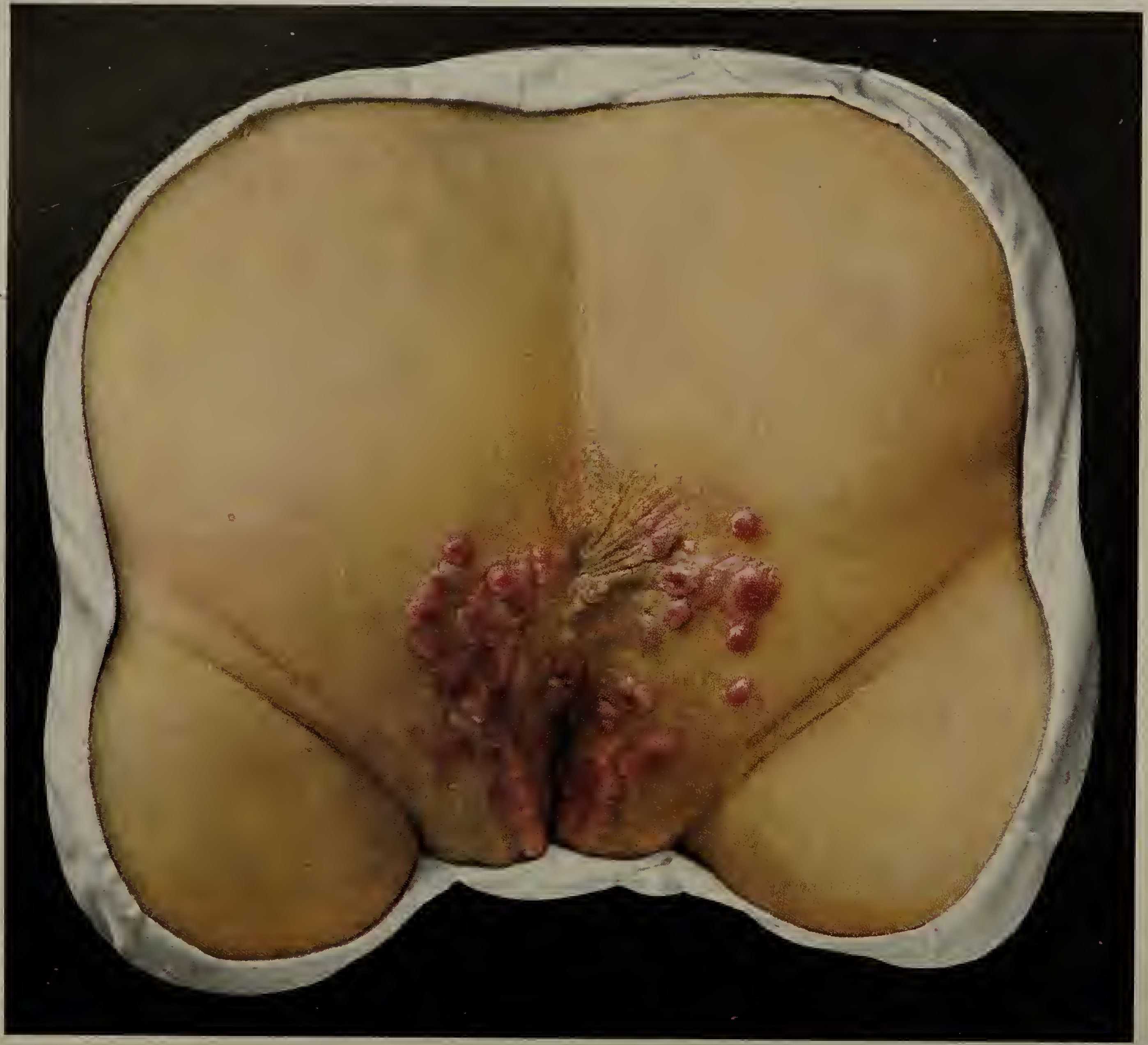


Fig. 279. Syphilis papulosa (Condylomata lata)

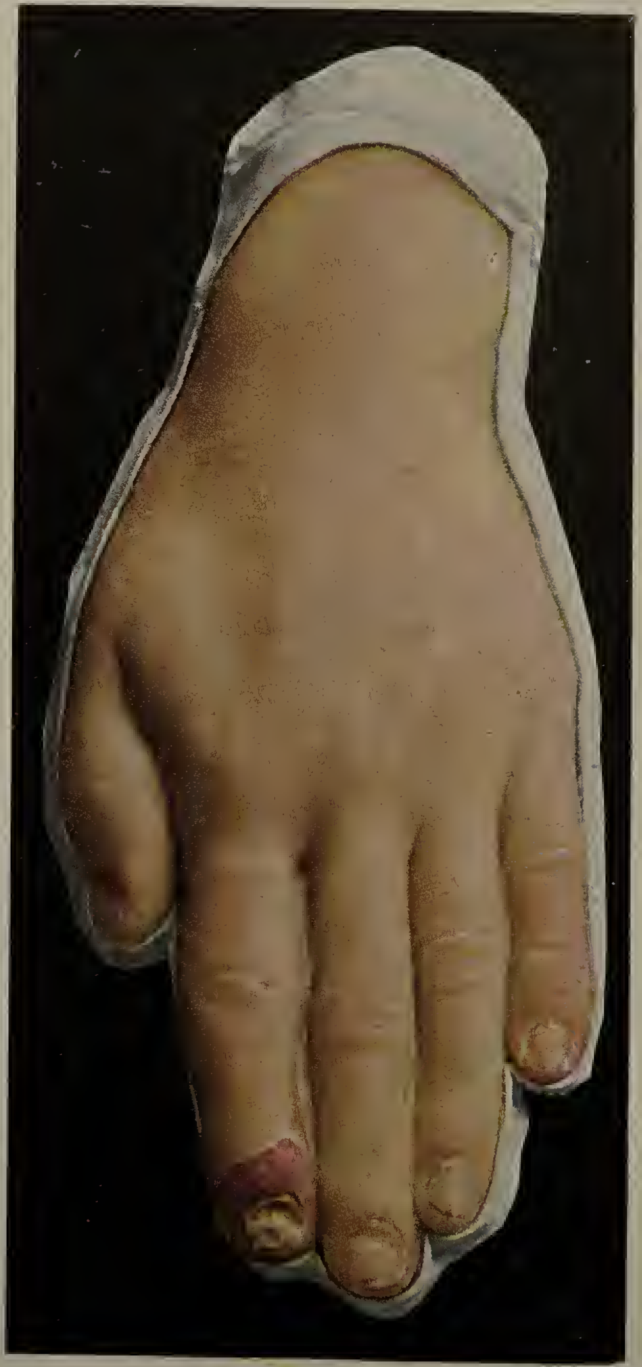


Fig. 280. Paronychia syphilitica

diseases, such as herpes and erythema multiforme, may affect the mouth and throat, but in these, as in all doubtful cases, the absence of any confirmatory evidence is conclusive.

Condylomata Lata (Plates 148 to 150, Figs. 277, 278, and 279)

Condylomata are simply secondary papules which, by their accidental situation in regions where there is warmth and moisture, have undergone a special development, becoming hypertrophic and œdematous. They are highly contagious, and may easily be the means of conveying disease to others. Condylomata appear as multiple flat papules of a red or pink colour, often with a gray sodden surface which may become eroded. Sometimes they form into confluent patches with a well-marked polycyclic border (Fig. 278). They are commonest in the peri-anal region, and are also met with in a high proportion of female cases on the vulva and over the skin in the neighbourhood (Fig. 279). Condylomata may also develop between the toes (Fig. 277), beneath the female breast, and on the posterior surface of the scrotum. The exudation from them has a peculiar fœtid odour, which is very characteristic and easily recognised. They are sometimes well developed and numerous about the anus and vulva in cases where the other manifestations of syphilis are scanty, and are in such circumstances of special value in establishing the diagnosis.

Condylomata lata have occasionally been mistaken for piles, from which they actually differ in every essential; and they are sometimes confused with the so-called gonorrhœal warts or condylomata accuminata (see Fig. 27).

Paronychia Syphilitica (Plate 150, Fig. 280)

In the secondary stage of syphilis, ulcerative lesions involving the nail-bed and matrix may develop around one or more nails. This condition is most often seen on the thumb or great toe; there is usually a certain degree of suppuration, a crescentic ulcerated area developing at the base of the nail, which becomes involved in the process and is undermined and detached. There is a certain amount of pain, but this is of relatively slight degree as compared with the coccal infections.

Frambœsiform Syphilis (Plate 151, Fig. 282)

This very rare form of vegetating syphilis presents many difficulties in diagnosis, partly because it is so seldom seen and partly because in it many of the features common to syphilis in general are wanting. The lesions consist of raised papillomatous or vegetating patches, usually few in number, situated on the neck, trunk, scalp, or elsewhere. In this condition, in certain cases at least, the appearance of the positive Wassermann reaction may be delayed. Contrary to what would be expected from the massive nature of the eruption, subsequent scarring is slight or even entirely absent, the site of the lesions being usually marked only by an area of pigmentation.

Late Cutaneous Syphilis

After a latent period of five to twenty or more years, the tertiary cutaneous manifestations may appear in untreated or insufficiently treated—that is, in uncured—cases. In a considerable proportion, and in women especially, no history of the original infection can be obtained; in other cases the patient has come to regard his disease as something belonging to the past, and is often seriously disturbed by the unexpected reminder of an unpleasant experience. The appearance of a late cutaneous eruption is possibly the most fortunate thing that can happen to a syphilised individual, except cure, because the lesions are easily removed by treatment and because subsequent or collateral involvement of the central nervous system, such as tabes or general paralysis, very rarely develops.

In the tertiary stages the cutaneous lesions are asymmetrical, grouped, and localised, and are few in number as compared with the extensive efflorescences of the secondary period. They do not exhibit the same tendency to spontaneous resolution, but are progressive, and usually cause scarring, with or without ulceration; spirochætes are rare, and can only be found with difficulty. The tertiary lesions on the skin are of the nature of gummata, whether they are superficially situated in the corium or deeper in the subcutaneous tissue. The superficial tuberous, or nodular, syphilides may be met with on any part of the body—on the face, arms, or trunk. The nodules, of which the eruption is composed, vary in size from a hemp-seed to a pea. Their colour is red or brown, and they may be aggregated (Fig. 284), but are much more commonly and characteristically formed into circles or segments of circles, which gradually expand and coalesce, producing serpiginous or gyrate figures (Figs. 284, 285, and 287). The individual nodules may be crusted or covered with scales (Fig. 284), or they may definitely ulcerate in the intermediate forms (Fig. 288). As the eruption spreads outwards the circular formation becomes less distinct, but is still visible at the margin, where a series of loops can be discerned (Fig. 285). The central portion, over which the eruption has spread, is generally superficially scarred, or the scar may be irregular and thickened where the

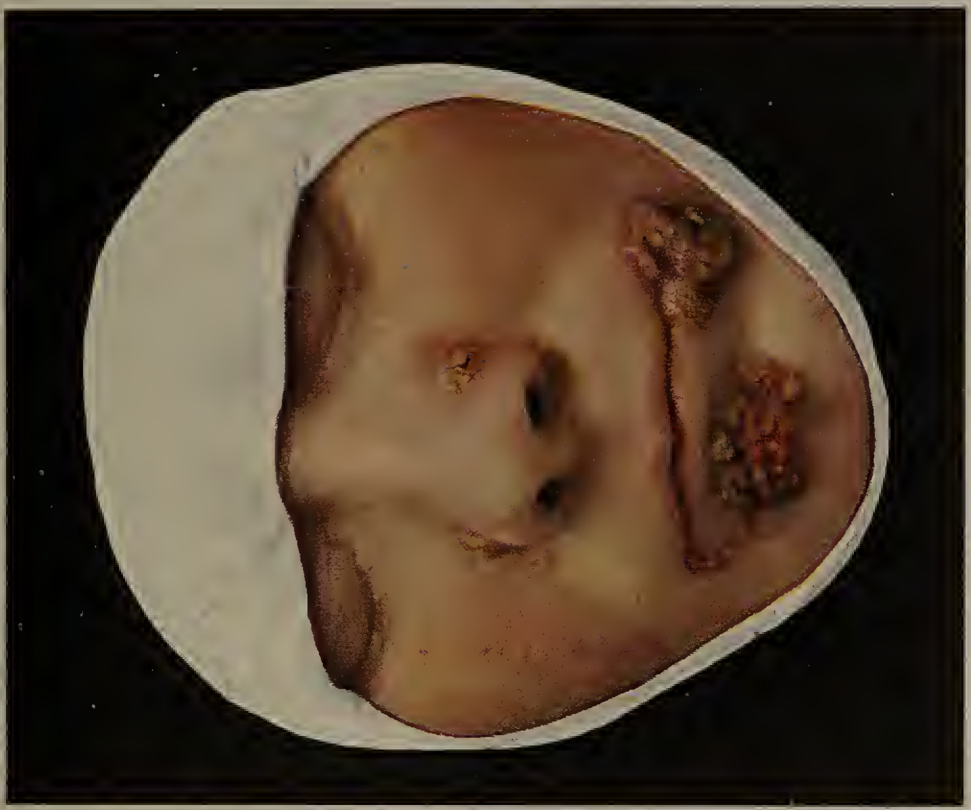


Fig. 282. Syphilis papulo-pustulosa (framboesiformis)

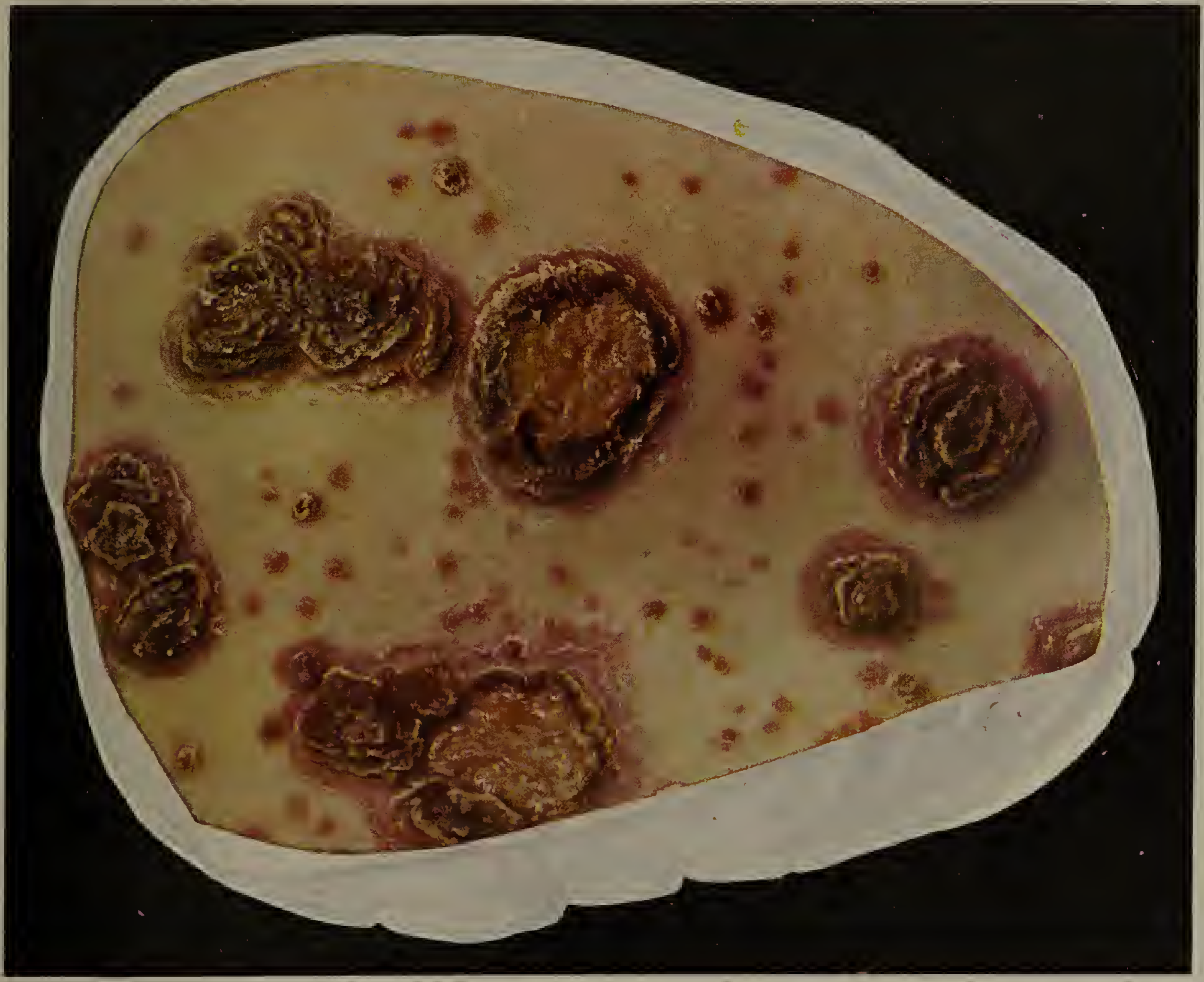


Fig. 281. Syphilis maligna (Rupia syphilitica)

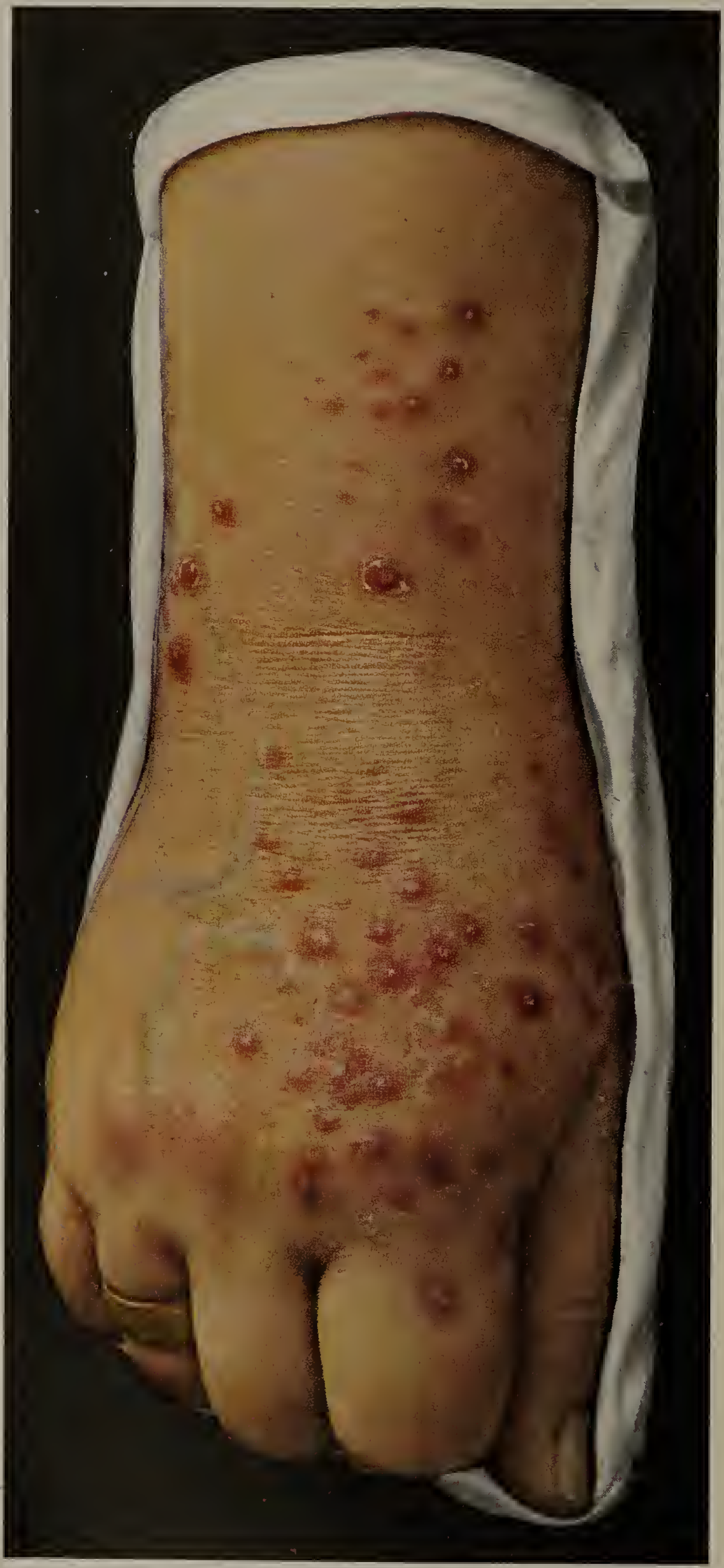


Fig. 283. Syphilis tuberosa aggregata

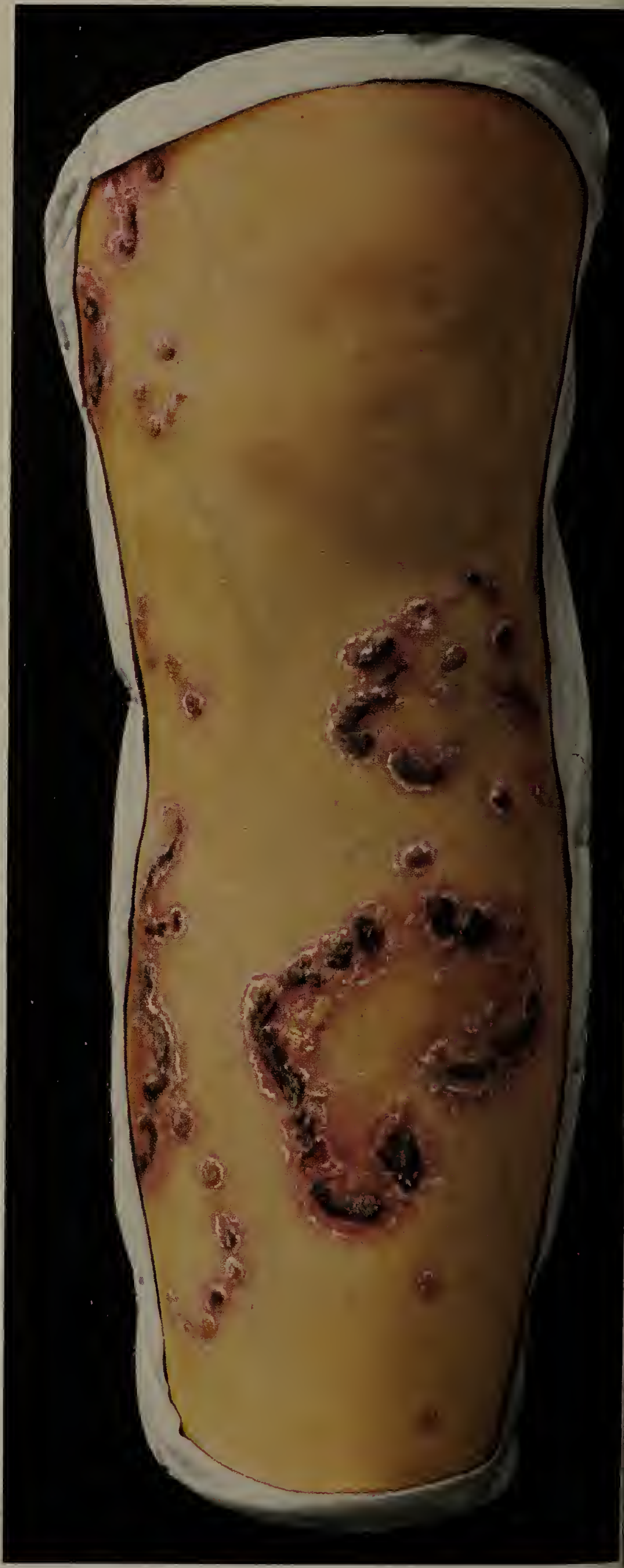
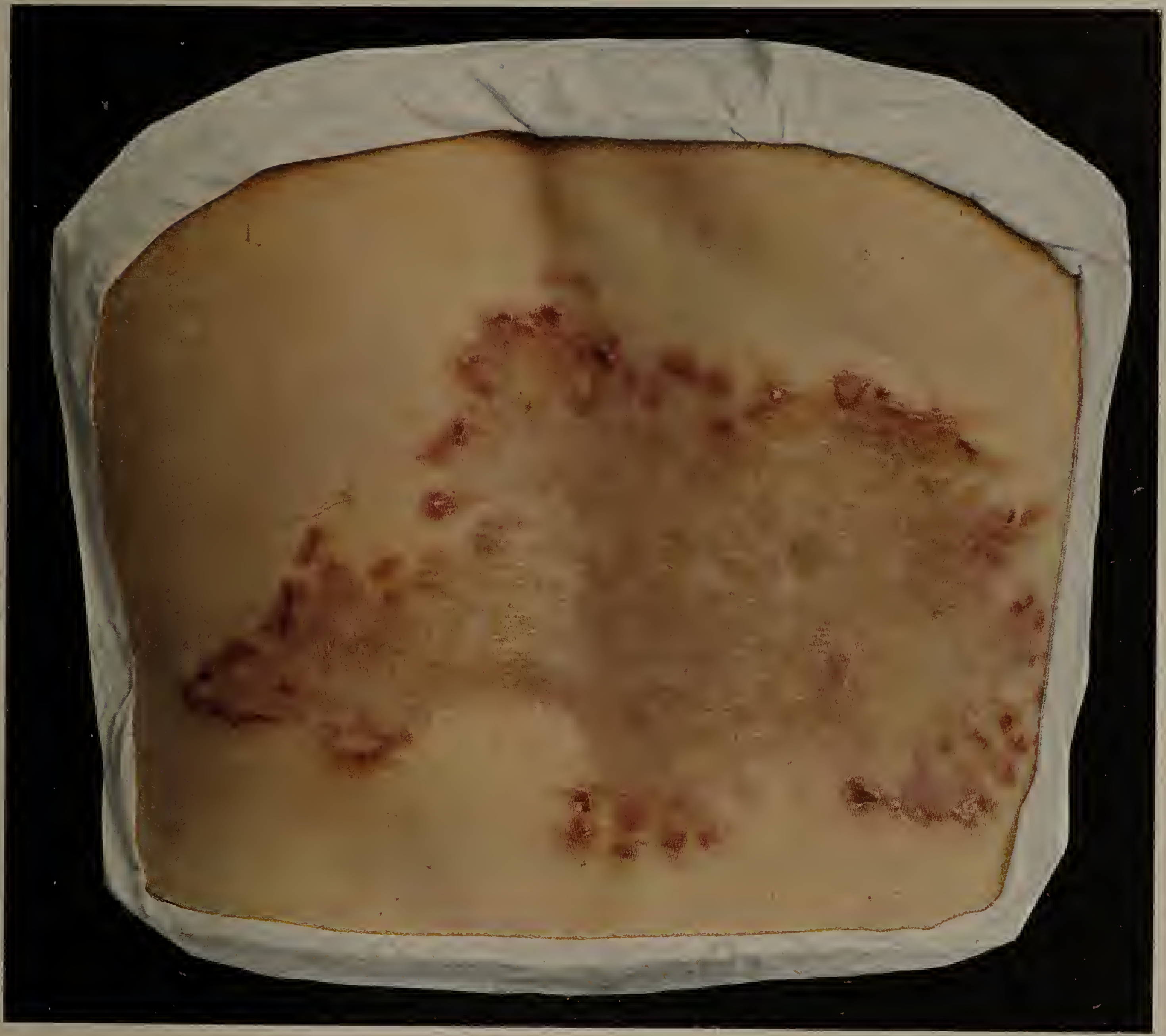


Fig. 284. Syphilis tubero-serpiginosa



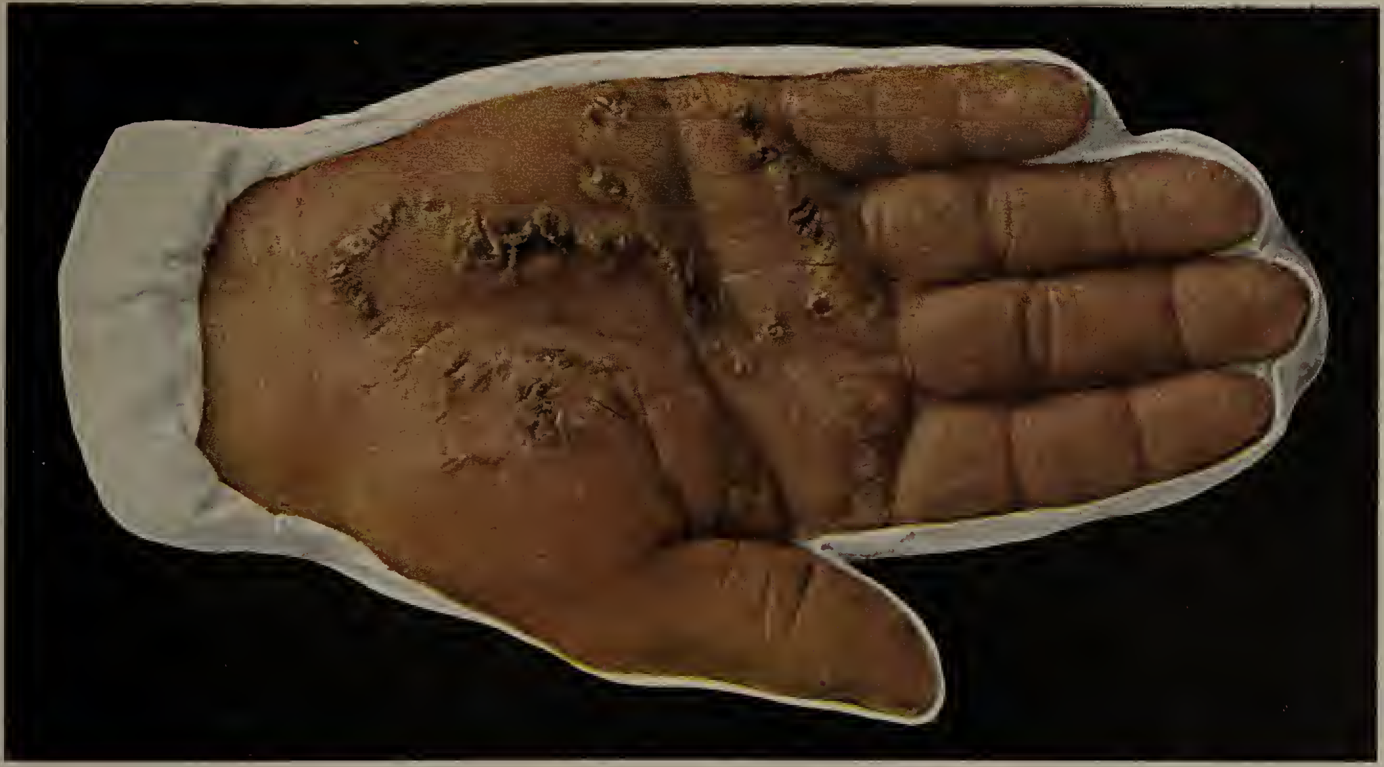


Fig. 285 and 286. Syphilis tubero-serpiginosa

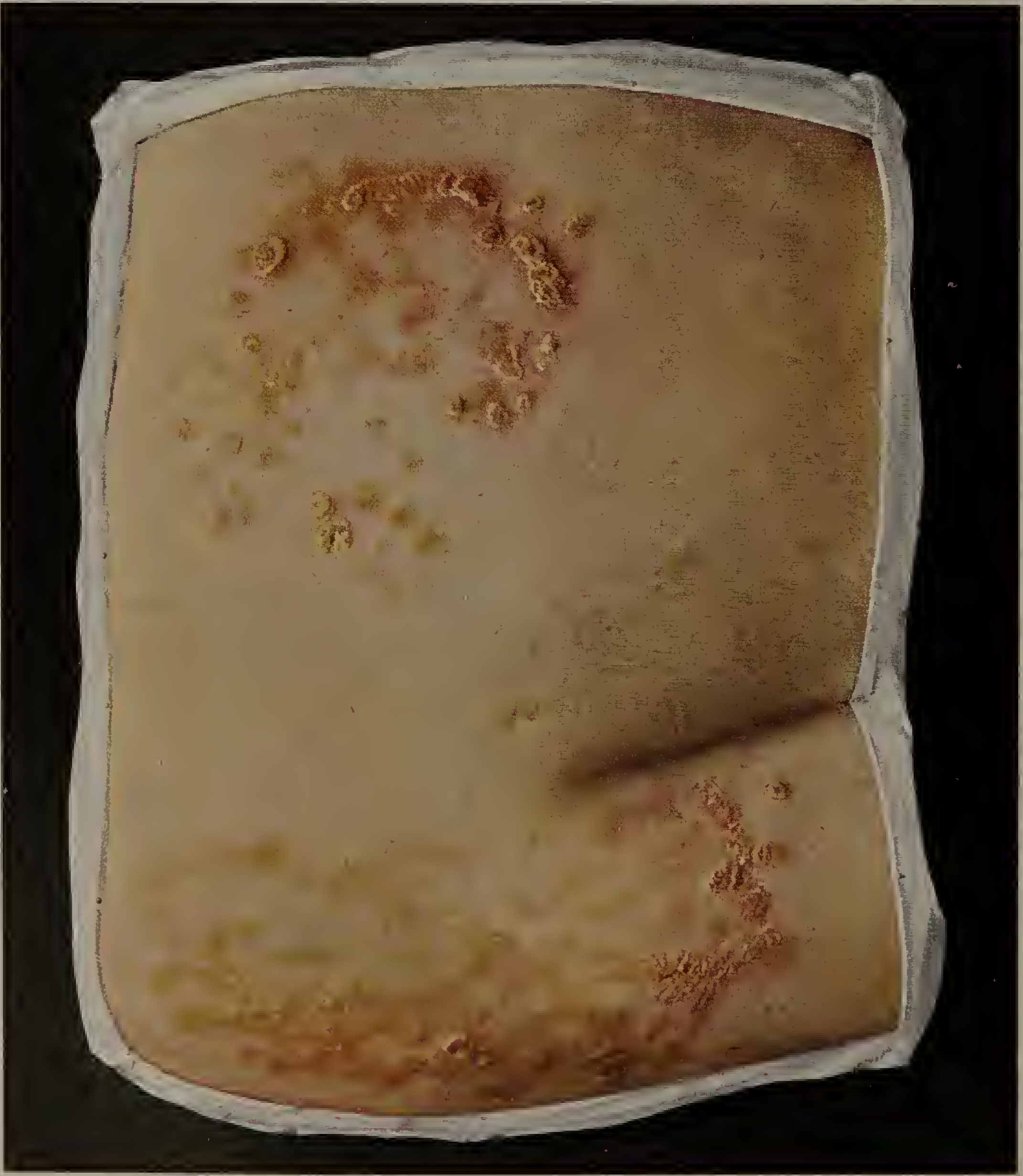


Fig. 287. Syphilis tubero-serpiginosa

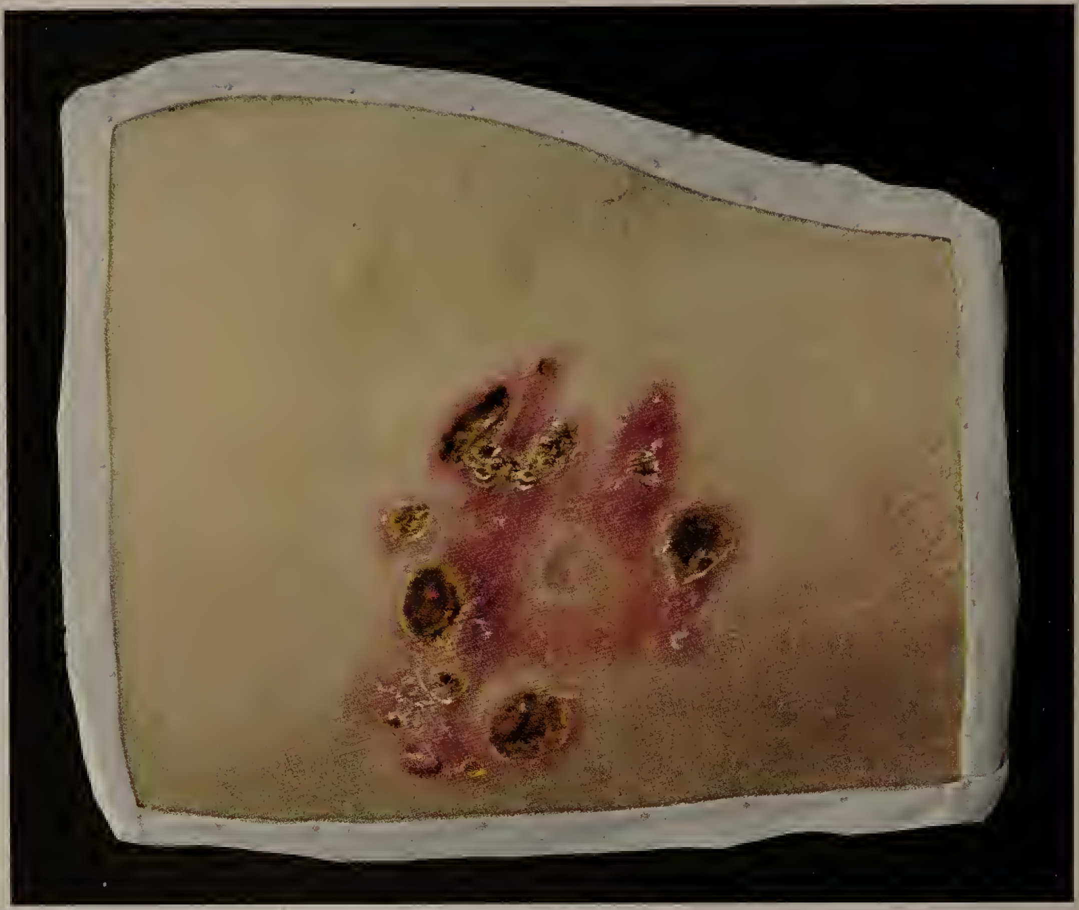


Fig. 288. Syphilis ulcero-serpiginosa

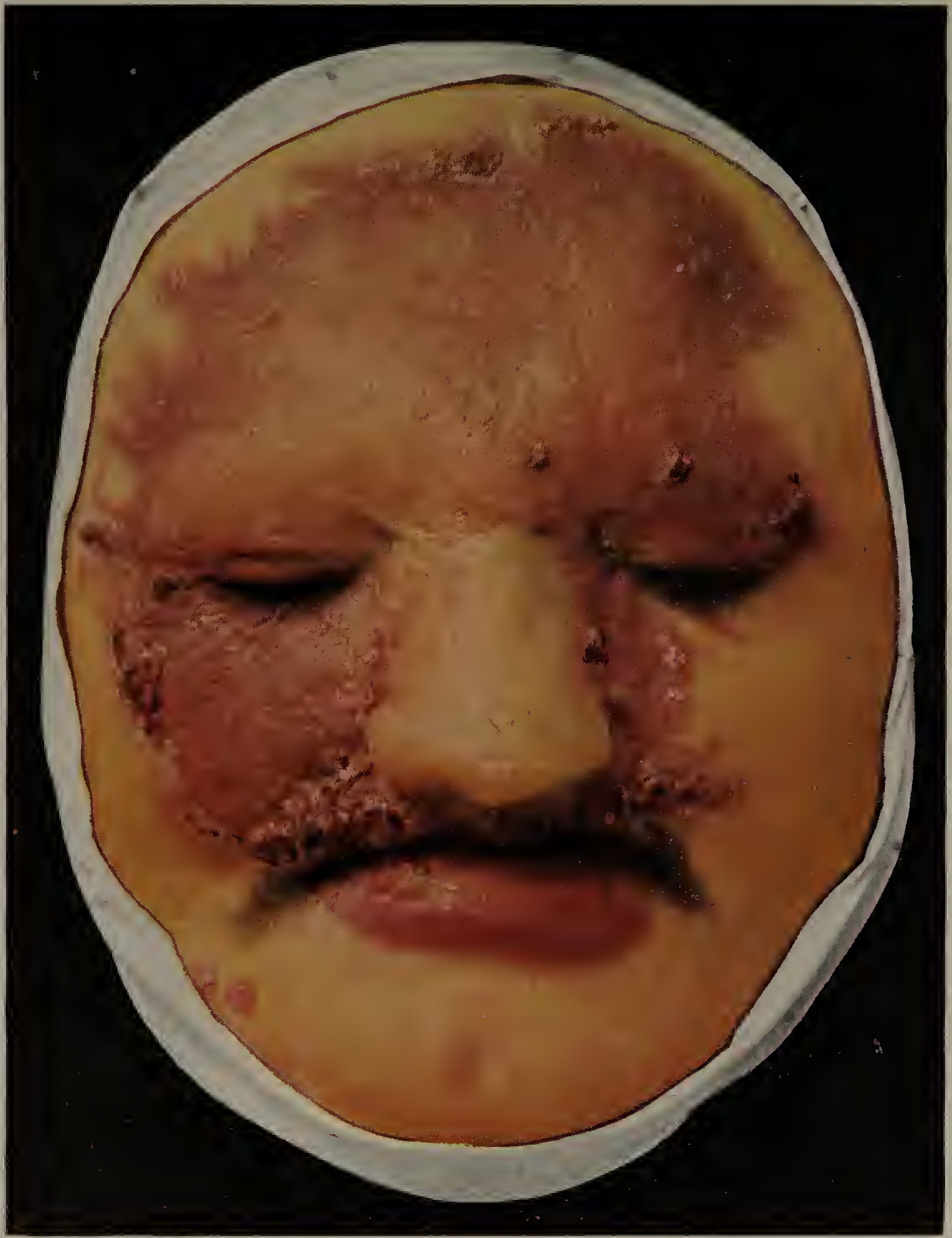


Fig. 289. Syphilis tubero-serpiginosa

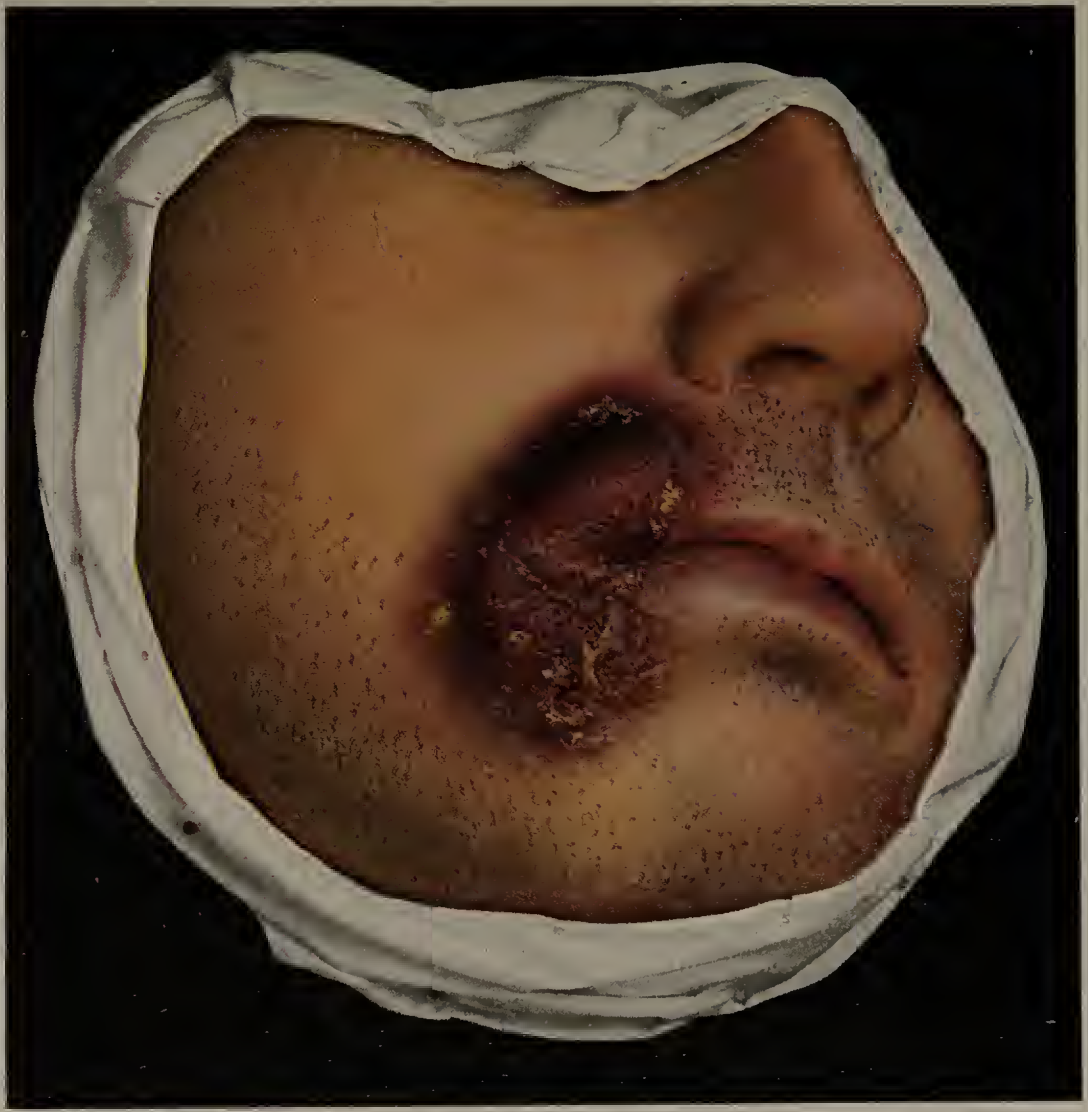


Fig. 290. Syphilis gummosa

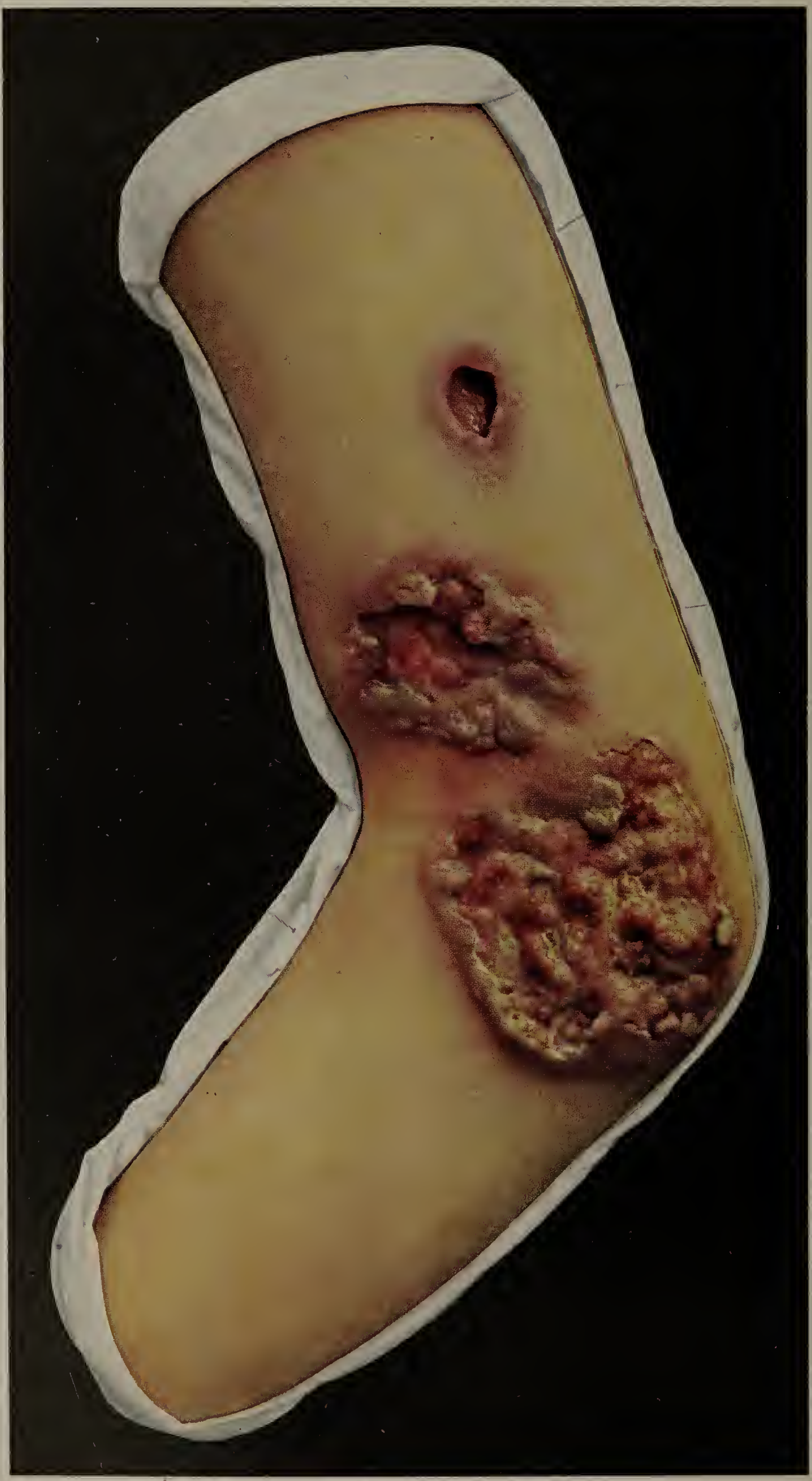


Fig. 291. Syphilis tubero-serpiginosa-ulcerosa et gummosa

gummatous process is deeper. A similar eruption may occur on the palms (Fig. 286), either symmetrically, or, what is very suggestive, on one palm alone. It is not very unusual, when the palms are involved in the late stages, for one to present a sharply circumscribed area or areas of hyperkeratosis, often on a dark red base.

Subcutaneous gummata originate in the hypoderm as a hard nodule or as a series of nodules. After a time softening occurs and, if the lesion is untreated, the overlying skin becomes dark red or purple and finally gives way at one or several points, allowing exit of the gummy contents (Figs. 299 and 301). The resulting ulcer has a dirty, sloughing base and abrupt margins; if two or more similar lesions have coalesced, the outline is polycyclic, as in the case of the more superficial lesions. Subcutaneous gummata may occur in any situation, but are especially common on the buttock, face, scalp, and lower limbs. Intermediate forms between the superficial and deep gummata are found, in which a nodular serpiginous eruption is associated with a deeper gummatous lesion (Fig. 291). Gummata are not very uncommon on the tongue, where they pass through the same stages, forming ulcerated lesions which leave deep scars on healing (Figs. 292 to 295).

Buccal leucoplakia is not uncommon in old-standing syphilis in the male sex. The condition is to some extent due to the irritating effects of tobacco, and when it occurs is seen as white, superficial, or thickened patches on the tongue and buccal mucosa (Fig. 298). It is important because it predisposes to cancer of the tongue. Leucoplakia should be distinguished from the scrotal tongue (Fig. 296), a congenital and often familial affection where the organ exhibits numerous furrows, and from the transitory benign plaques (exfoliatio areata linguæ, Fig. 297) met with in young children and occasionally in adults, characterised by red circles with a white or gray border.

A gumma of the palate is a relatively common manifestation of the later phase of syphilis. As a result the hard palate may become perforated, and when, as not infrequently happens, there is a simultaneous involvement of the nasal bones, an offensive nasal discharge is noted. Gummata may also develop in the soft palate, and cause considerable destruction there, with adhesions to the posterior pharyngeal wall (Figs. 302, 303, and 304). Gummatous ulceration of the frontal and parietal regions, with caries, is now rarely observed, possibly because it is no longer the fashion to push mercurial treatment to such a degree as seriously to undermine the patient's general health (Fig. 305).

Chancre Redux (Syphilis Gummosa Glandis) (Plate 159, Fig. 300)

Reinduration at the site of the chancre may occur months or years after the original attack. The condition is a true gumma and presents the features of this condition; it is thus a punched-out ulcer, with abrupt edges and a sloughing base, containing no appreciable spirochætes and not accompanied by enlargement of the inguinal lymphatic glands. A special importance attaches to this lesion because it has been at times confused with a true reinfection, from which it differs in the absence of any history of risk of recent exposure to infection and in its clinical and bacteriological features. Further, it develops on the site of the original sore, a feature which is in itself always suspicious.

Congenital Syphilis (Plates 162 to 165, Figs. 306 to 314)

In congenital syphilis an eruption, or other signs of the disease, may appear soon after birth, or there may be a delay of months or years before the characteristic manifestations, such as keratitis or gummata, are developed. The lesions thus correspond to some extent with the secondary and tertiary manifestations of acquired syphilis. In the more immediate forms the child appears healthy at birth, and no suspicion of infection is at first entertained. The earliest eruption, a very uncommon one, develops about three to five days after birth in the form of bullæ on the palms and soles (pemphigus syphiliticus, Figs. 309 and 310). The bullæ originate on red spots which very rapidly form into blisters and the disease is generally fatal. The lesions contain numbers of spirochætes, which allow of their identification in doubtful cases. A more common, and therefore more characteristic, rash is observed about the fourth to the tenth week. It is very similar to the polymorphous rash of the acquired disease, and consists of red macules and papules, which are particularly developed over the buttocks, palms, and soles and about the mouth; other parts of the body may be similarly affected (Figs. 306, 307, and 308). Certain general symptoms accompany the rash, such as wasting, crying at night, and a catarrhal or purulent nasal discharge, giving rise to the well-known snuffles; in some cases an enlargement of the spleen occurs. True condylomata are also met with, usually about the anus, where they appear in the usual form. Fissures are apt to develop at the muco-cutaneous junctions—for example, at the angles of the mouth—leaving as a result radiating scars.

At a later stage the various delayed forms of congenital syphilis may manifest themselves. Gummata may occur in various situa-

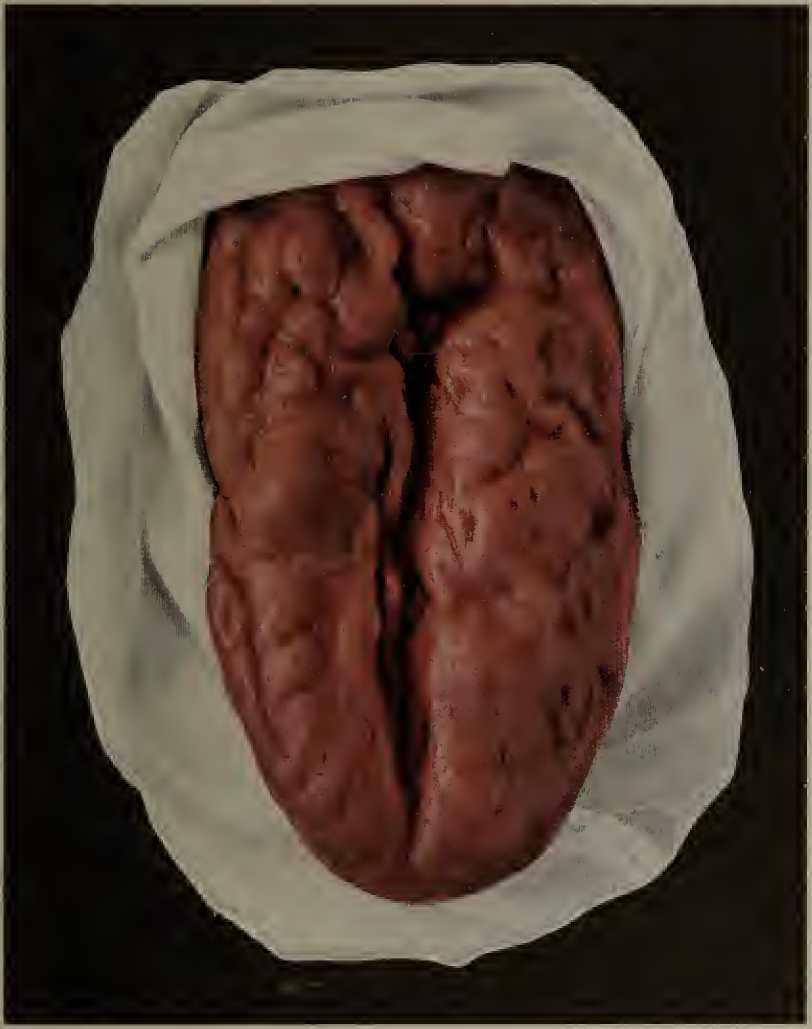


Fig. 292. Syphilis gummosa linguae diffusa

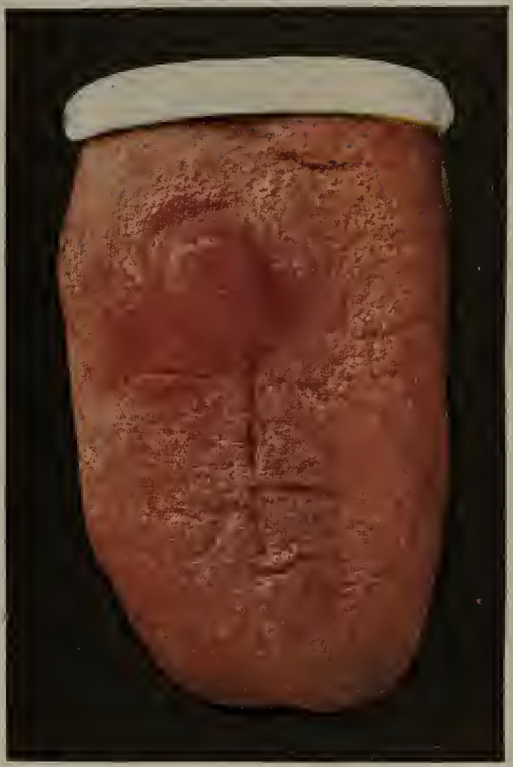
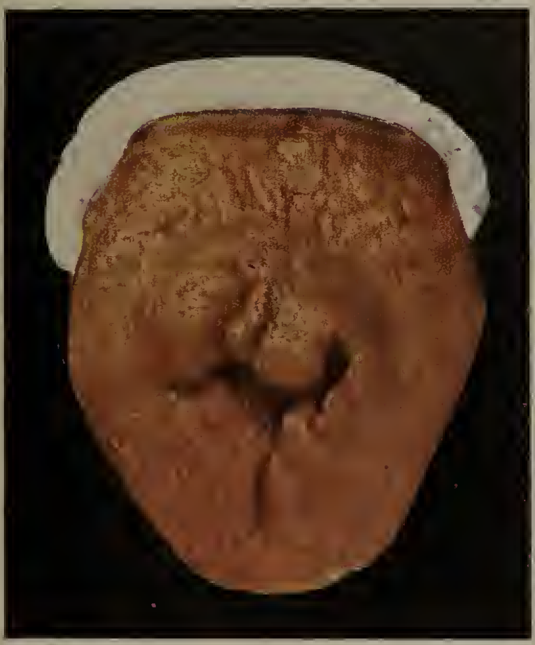


Fig. 293. Syphilis gummosa linguae



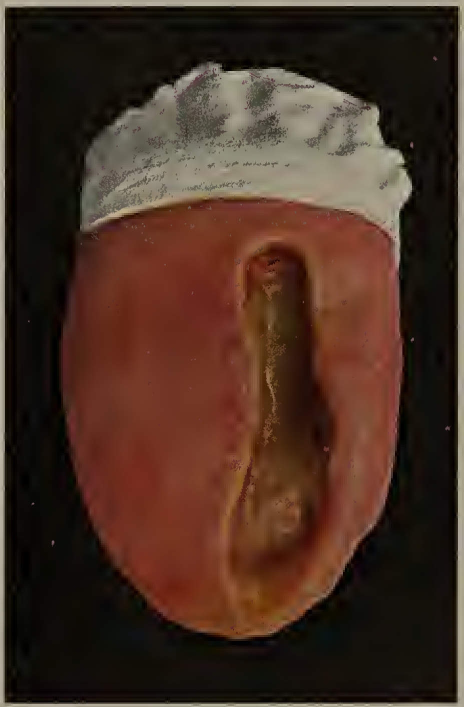


Fig. 294 and 295. Syphilis gummosa linguae

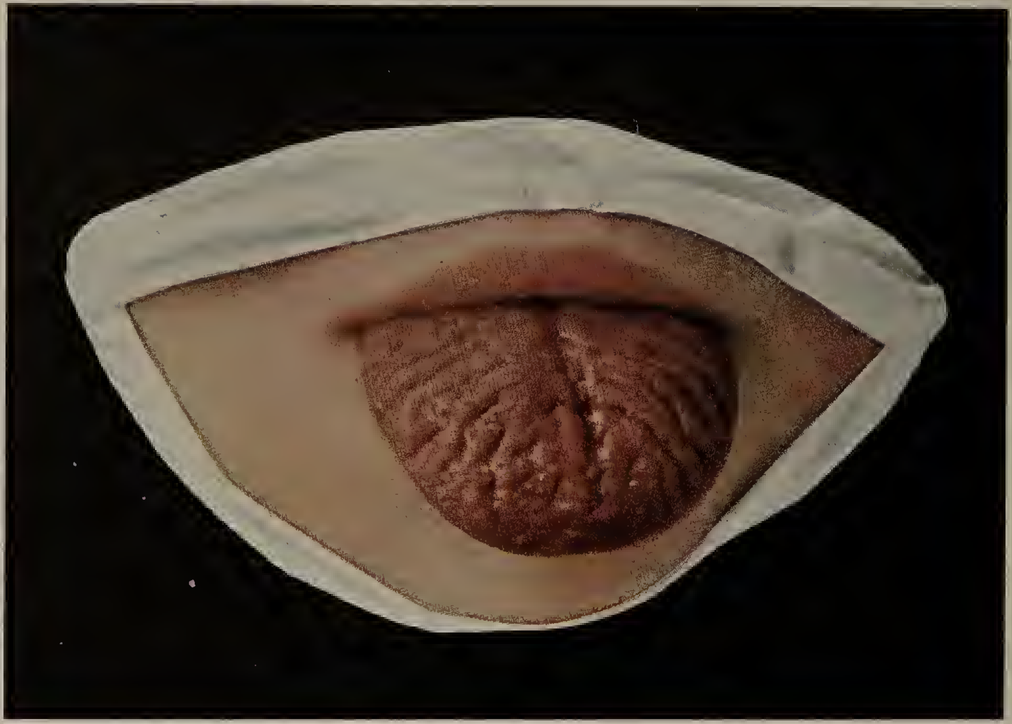


Fig. 296. Lingua scrotalis

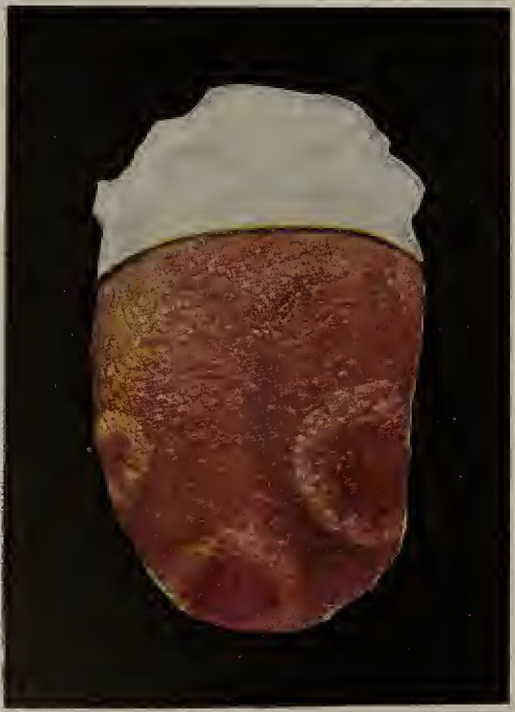


Fig.297. Exfoliatio areata linguae

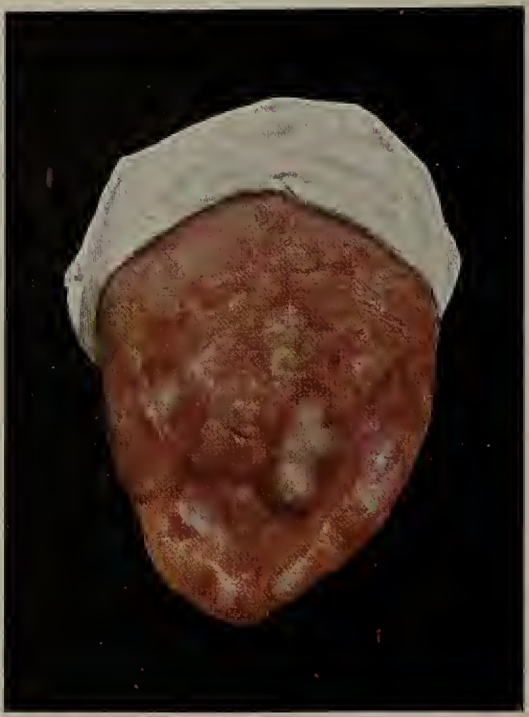


Fig. 298. Leucoplakia linguae

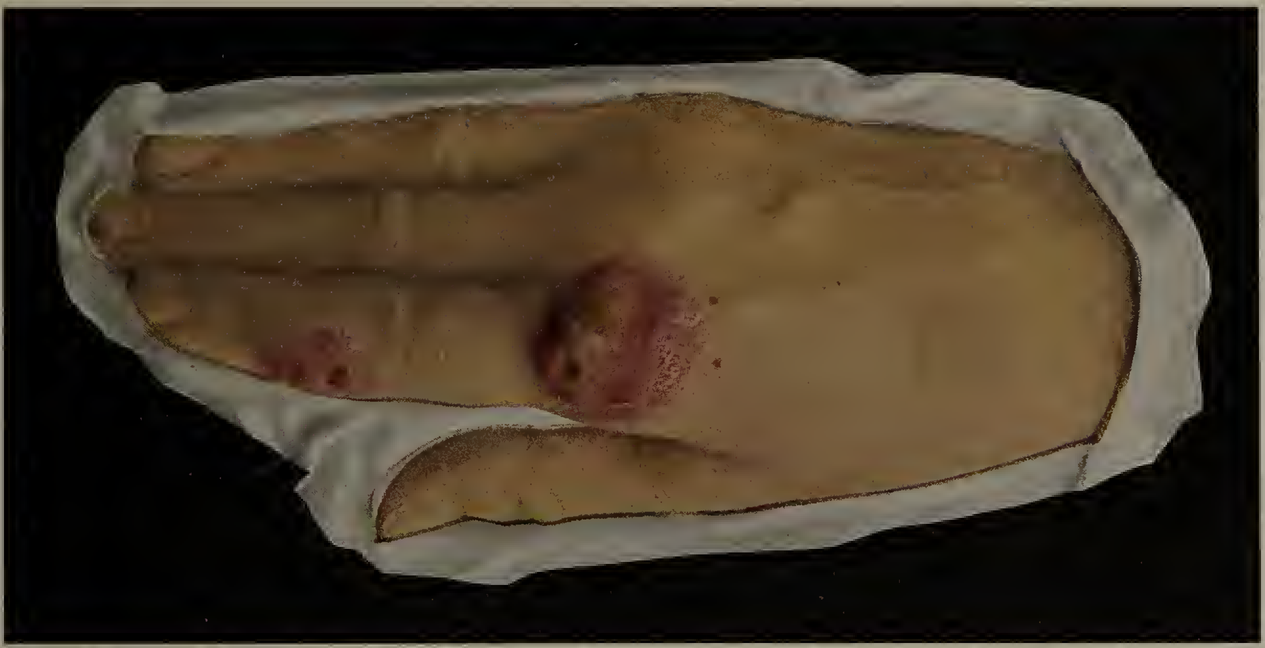


Fig. 299. Syphilis gummosa

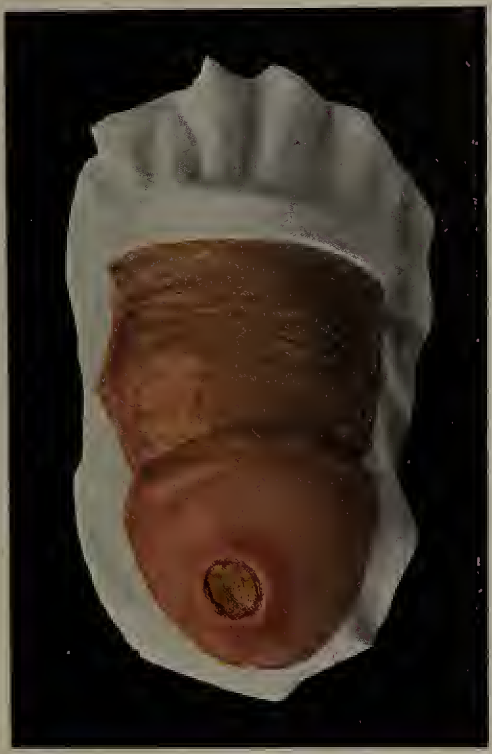


Fig. 300. Syphilis gummosa glandis (Reinduratio)

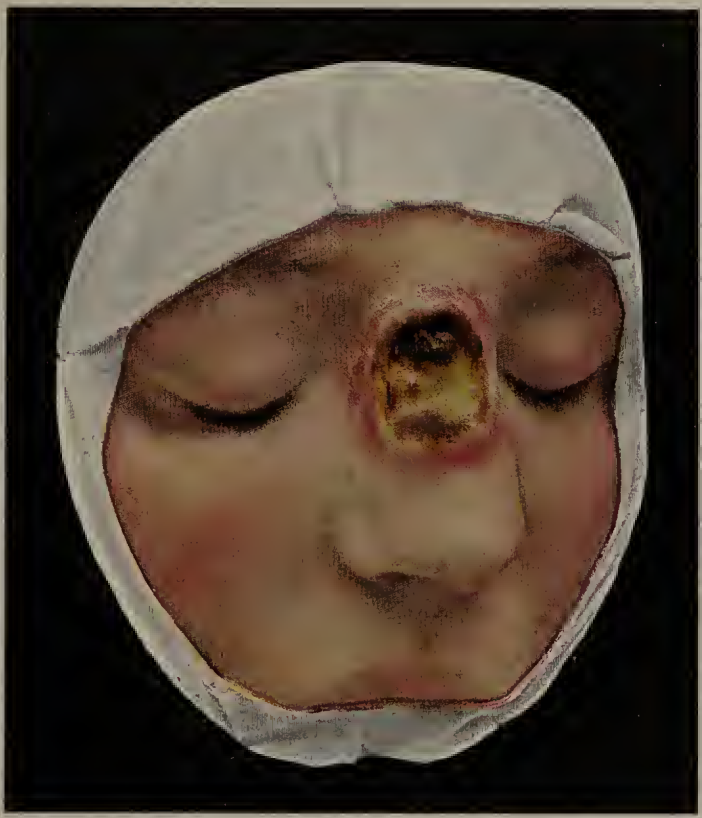


Fig. 301. Syphilis gummosa ossium nasi

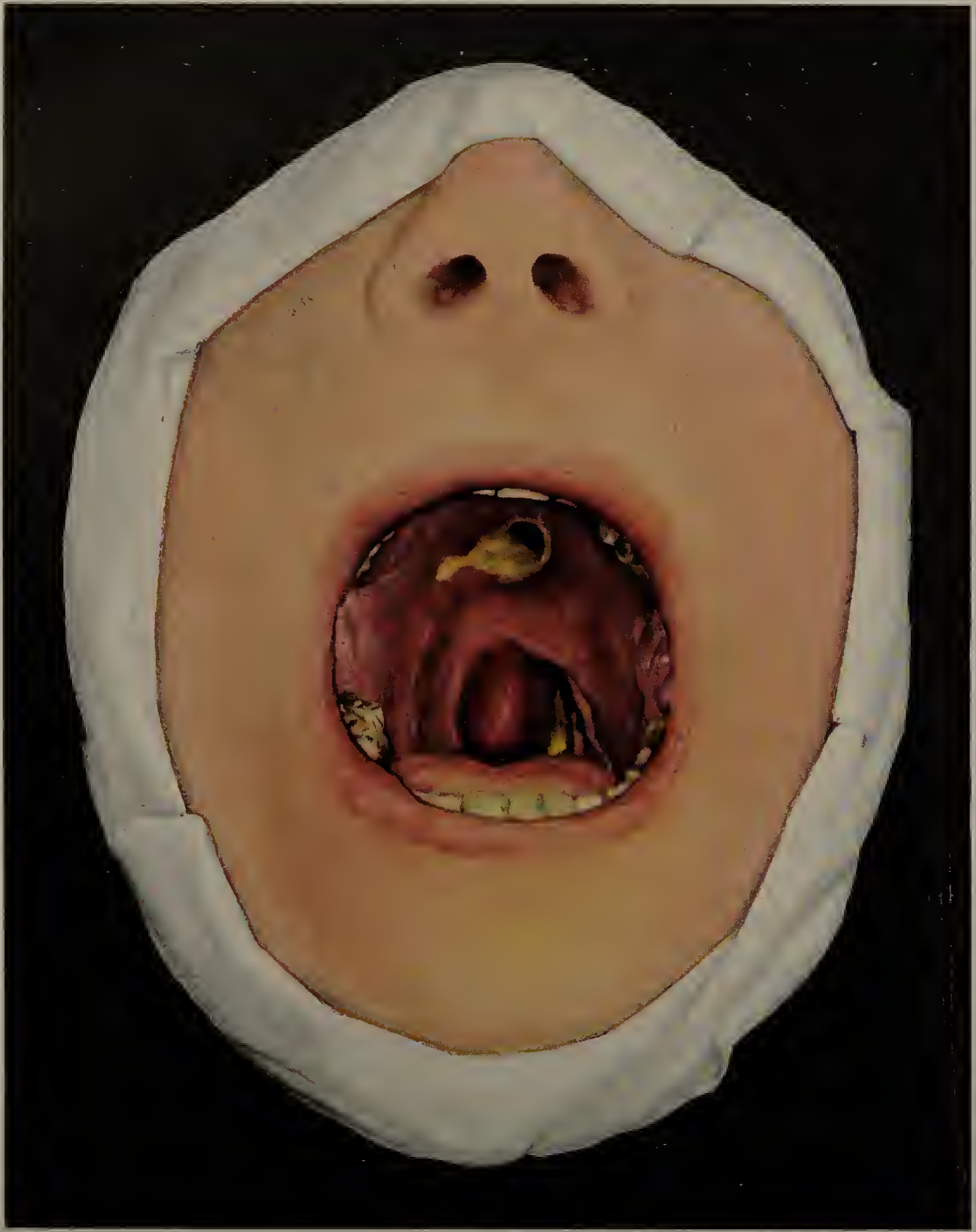


Fig. 302. Syphilis ulcerosa palati mollis

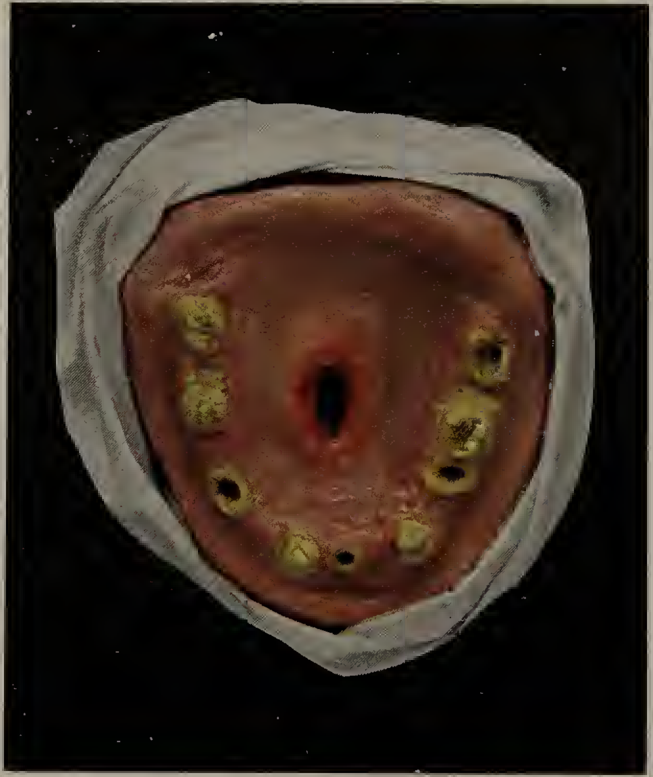


Fig. 303. Syphilis ulcerosa palati duri

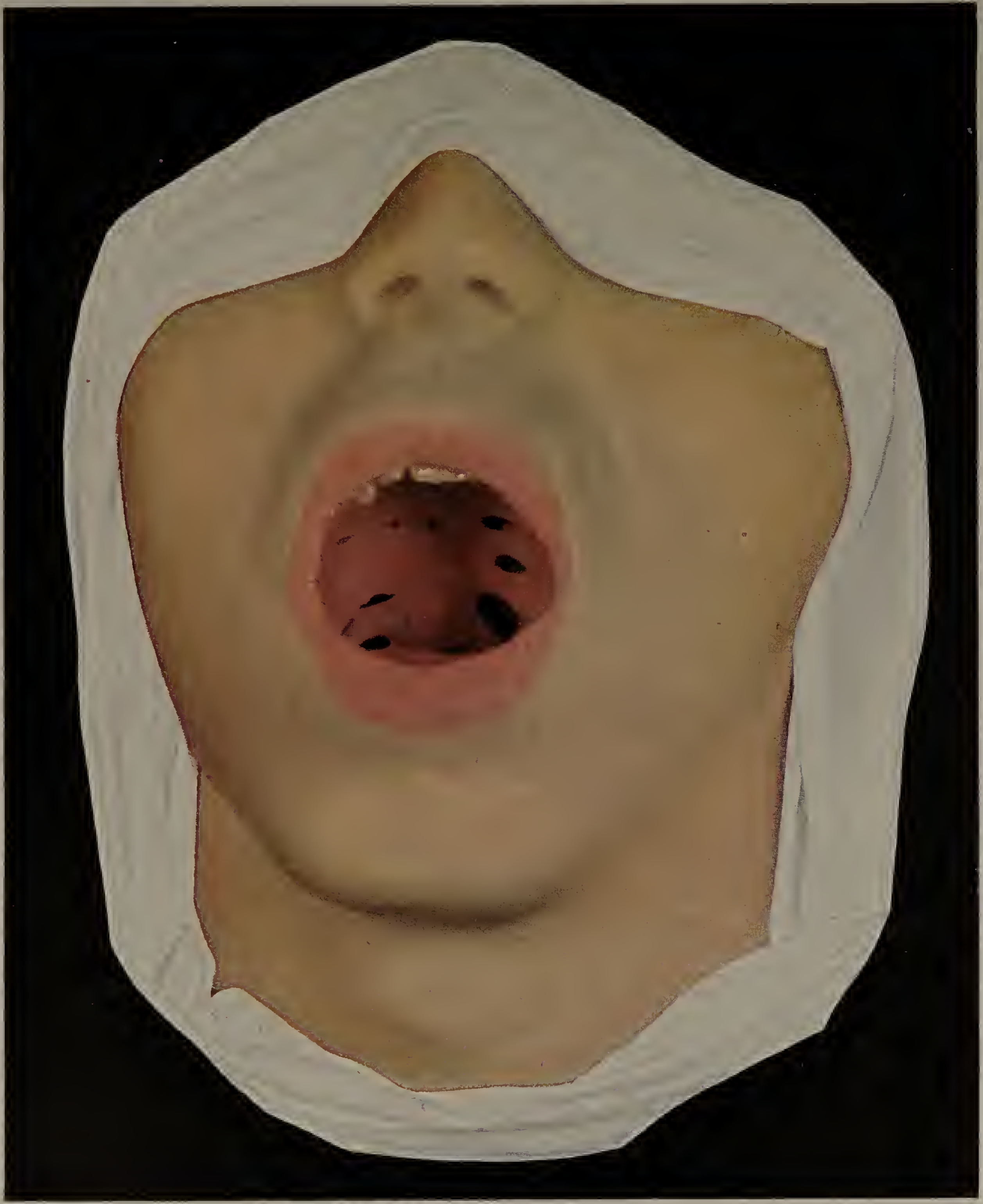


Fig. 304. Cicatrices palati mollis post ulcerationes syphiliticas

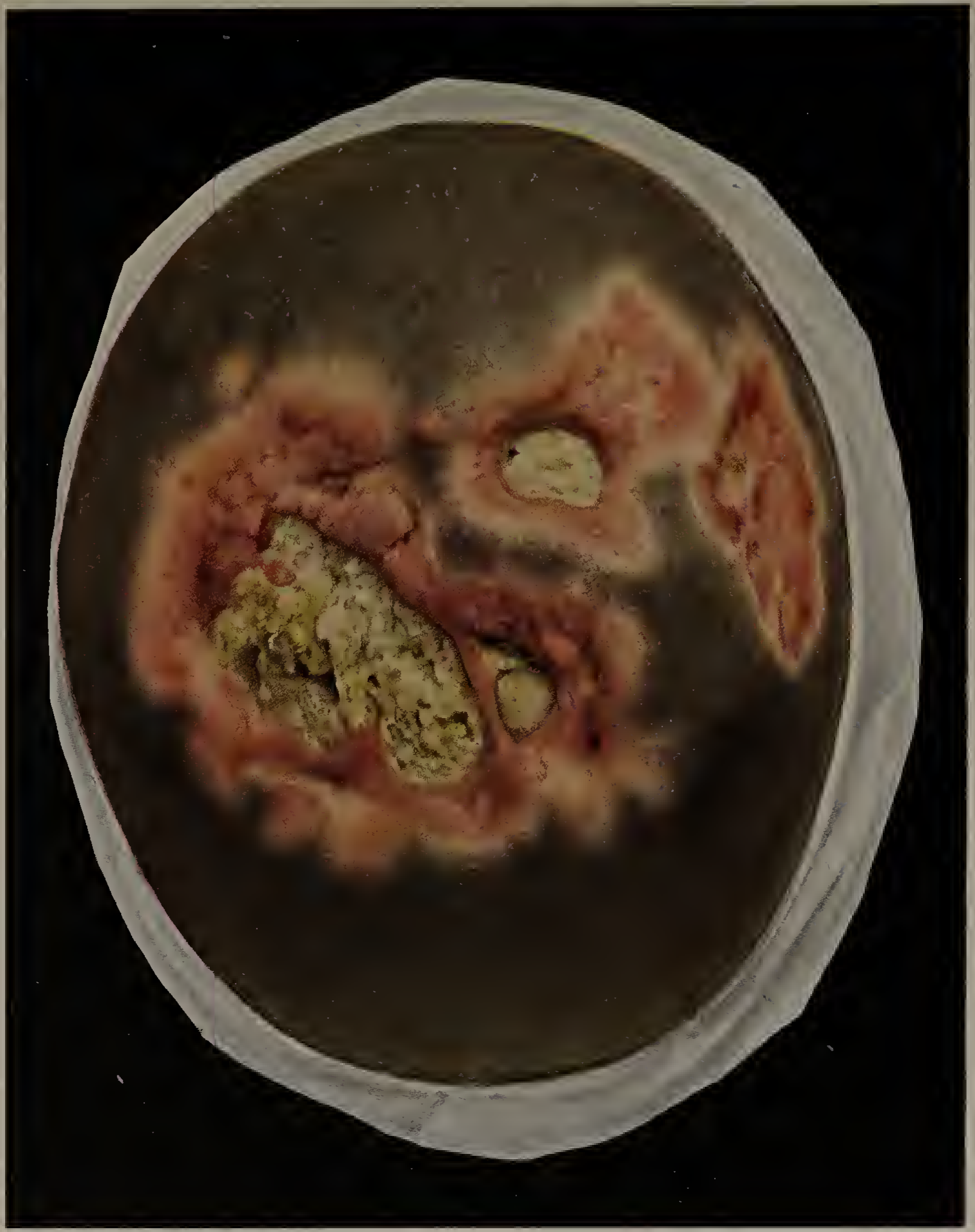


Fig. 305. Caries syphilitica ossium cranii

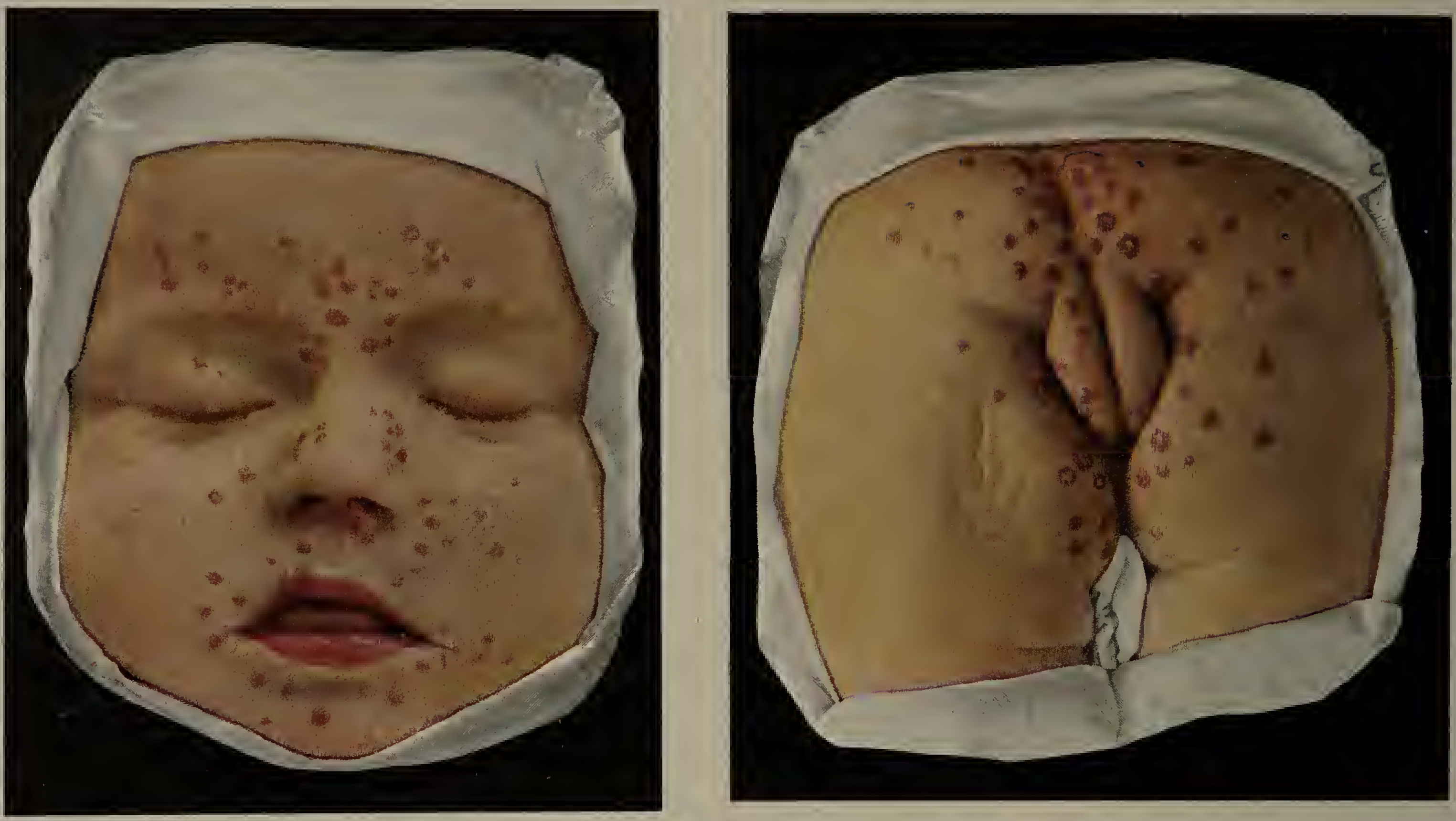


Fig. 306 and 307. Syphilis congenita papulosa

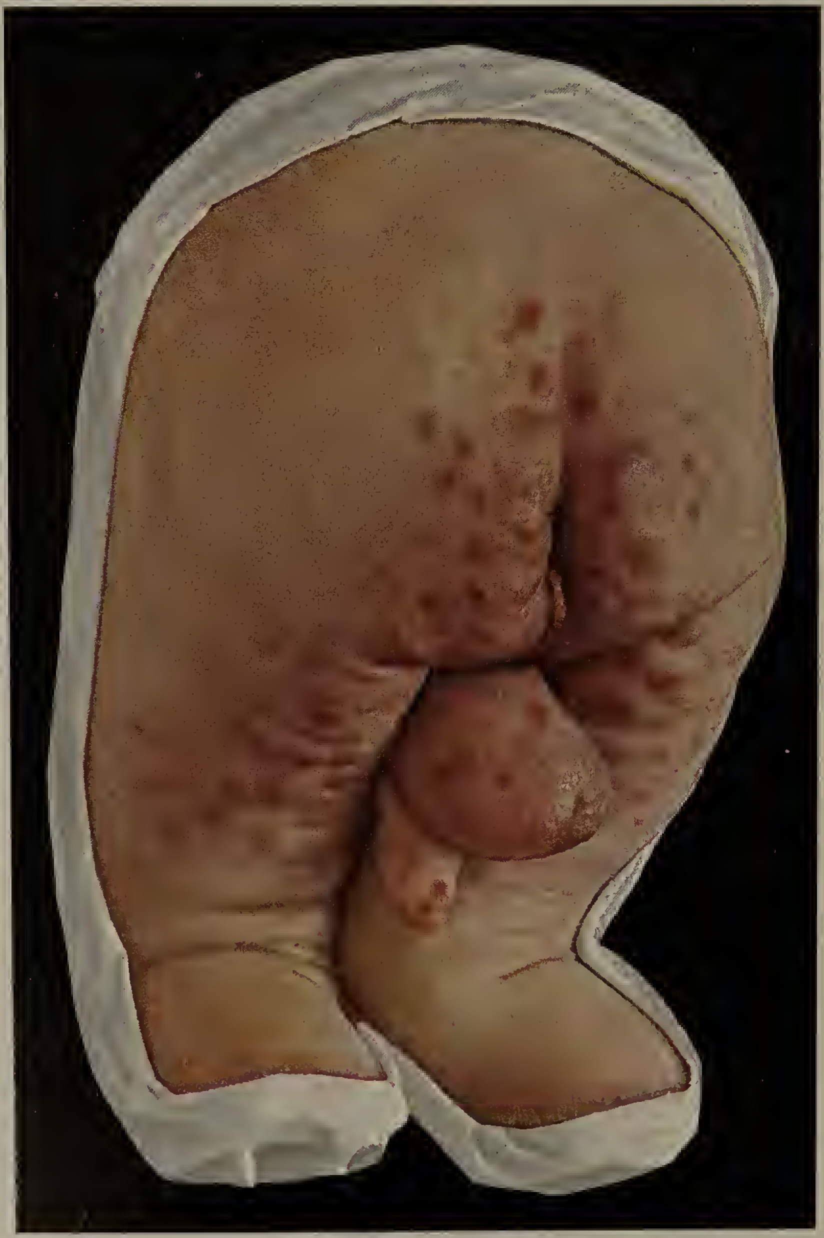


Fig. 308. Syphilis congenita papulosa

tions, and the palate may become perforated. Sometimes the destructive changes are very severe and extensive, causing in consequence great mutilation (Figs. 313 and 314). Among the more serious and more common manifestations of congenital syphilis, interstitial keratitis should be mentioned. This condition most often affects one eye at first, but tends in most cases to become bilateral. The resulting white opaque patches on the cornea seriously interfere with sight. Deafness, occurring from about the seventh to the fourteenth year, may also result from disease of the internal ear, sometimes developing with unexpected abruptness. The association of deafness with interstitial keratitis and Hutchinson's teeth has been named the "syphilitic triad." A great many other manifestations of congenital syphilis, such as epiphysitis, dactylitis and chronic symmetrical synovitis, and affections of the nervous system, such as juvenile tabes and paresis, are well known and recognised. Syphilitic epiphysitis occurs relatively early, and may result in actual separation of the epiphysis from its diaphysis. The affected limb hangs motionless, and if raised is allowed to drop again, not because the little patient is unable but because he is unwilling to move it (pseudo-paralysis).

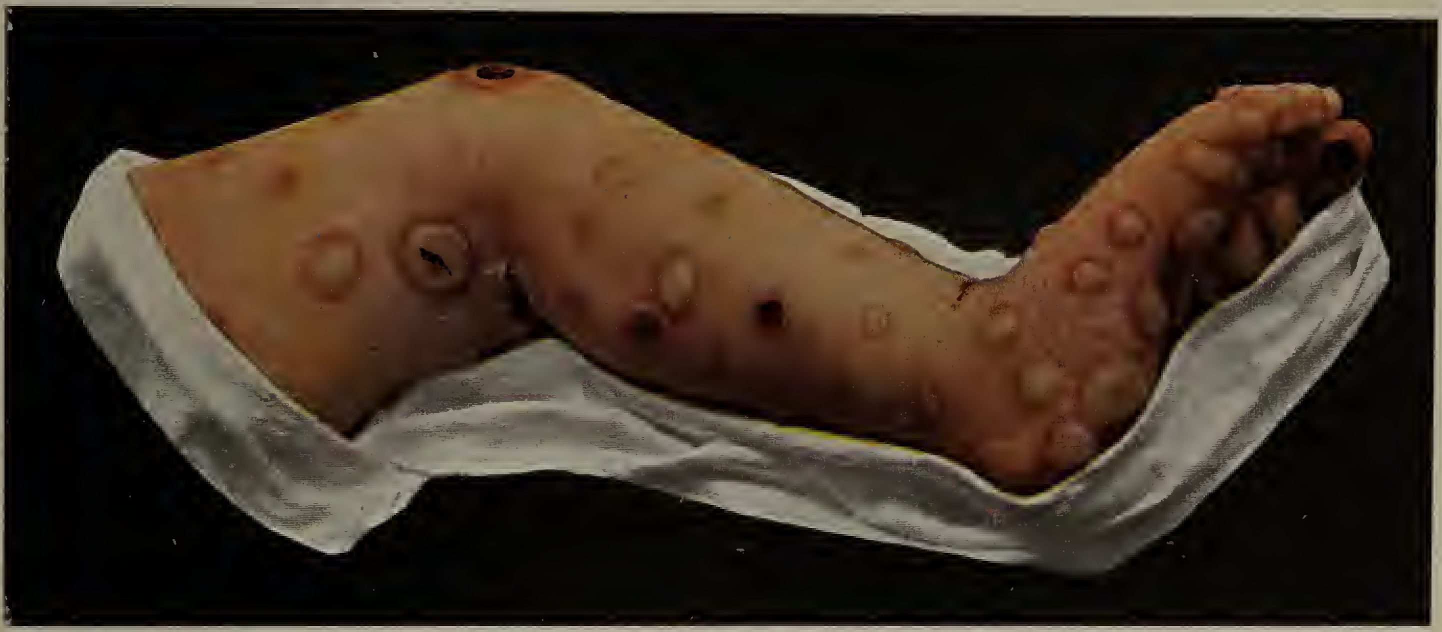
In dactylitis, a somewhat rare complication of congenital syphilis, there is a fusiform swelling of one or more of the fingers or toes; this condition is rapidly influenced by antisyphilitic treatment.

Diagnosis

In the earlier weeks of life the diagnosis of congenital syphilis depends upon the presence of eruptions on the skin, and on the wasting and other signs of profound intoxication. Although the early eruptions have long been recognised and well known, they are, nevertheless, not very often seen, the delayed forms of congenital syphilis (lues hereditaria tarda) being much more common. As the early rashes have a predilection for the napkin area, they have to be distinguished from the relatively common non-syphilitic eruptions met with in this situation, such as simple erythema or the impetiginous or eczematous dermatoses resulting from soiling and wetting. Special mention should be made of vacciniform dermatitis, a rare condition in which discrete papules, or papulo-vesicles, develop over the buttocks and become superficially eroded, or even ulcerated. Vacciniform dermatitis is actually a streptococcal infection, and is thus an atypical variety of impetigo of long duration (Fig. 9). In all doubtful rashes the diagnosis of congenital syphilis should be confirmed by the presence of an eruption on the palms and soles. As in the adult, further evidence is obtained by the discovery of the *Spirochœta pallida* in the lesions and by the Wassermann reaction. The examination of the mother is also of considerable importance and may furnish valuable information. Thus, if the mother's Wassermann reaction is positive, or if a record of frequent miscarriages is obtained, the probability of congenital syphilis is very greatly enhanced. In some cases it is possible to elicit the history of the original syphilitic infection in the mother, but this is unusual. In the later forms of congenital disease one or more of the well-known stigmata of syphilis may be present. These include interstitial keratitis, curvature and thickening of the tibiæ, the saddle-shaped nose due to necrosis of the nasal bones, fissures at the angles of the mouth (Fig. 311), and a notched condition of the upper permanent incisors (Hutchinson's teeth, Fig. 312). The Wassermann reaction in the patient may be positive, but a negative result is not exclusive, because the reaction tends to die out at puberty.

Treatment of Acquired Syphilis

Since the introduction of the arsenical remedies the treatment of syphilis has undergone a complete change. The disease, or rather the cause of the disease, is now directly attacked by a specific remedy, and the effects of this attack are controlled by a specific test, the Wassermann reaction. In spite of this, it is still necessary in every case to consider both the individual and the form of syphilis from which he suffers, and to decide how the remedies can be used to the greatest advantage in the particular circumstances. Putting it in broad terms, it may be said that the earlier stages of syphilis are curable and communicable, while, in contrast, in the later stages the disease is incurable and non-communicable. Treatment, therefore, in the earlier—that is, the primary and secondary—stages should have as its object the cure of the individual and the prevention of the spread of disease to others. The practitioner, with this objective in view, is entitled to push the remedies to the limit of tolerance and to continue their use over a prolonged period. In the later stages cure is an improbable event, even when treatment is continued over years, although exceptions to this general rule are fortunately met with from time to time. In these circumstances, treatment should aim at the removal of symptoms and the arrest of the progress of the disease, and should be controlled by clinical observation rather than by the serological reactions, which are usually unaltered or only temporarily altered, even when intensive forms of treatment are adopted. The following records of the Wassermann reaction, taken at weekly intervals during



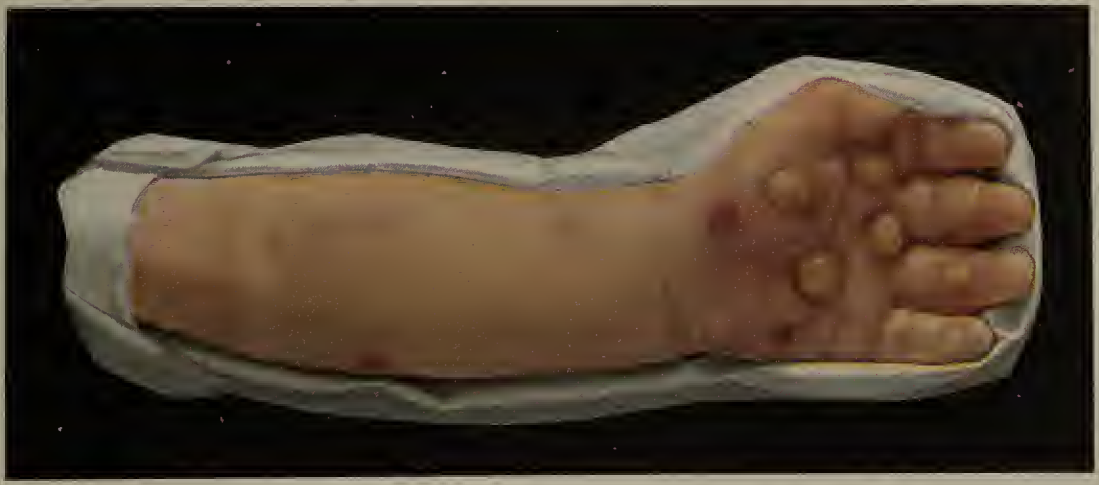


Fig. 309 and 310. Syphilis congenita bullosa (Pemphigus syphiliticus)

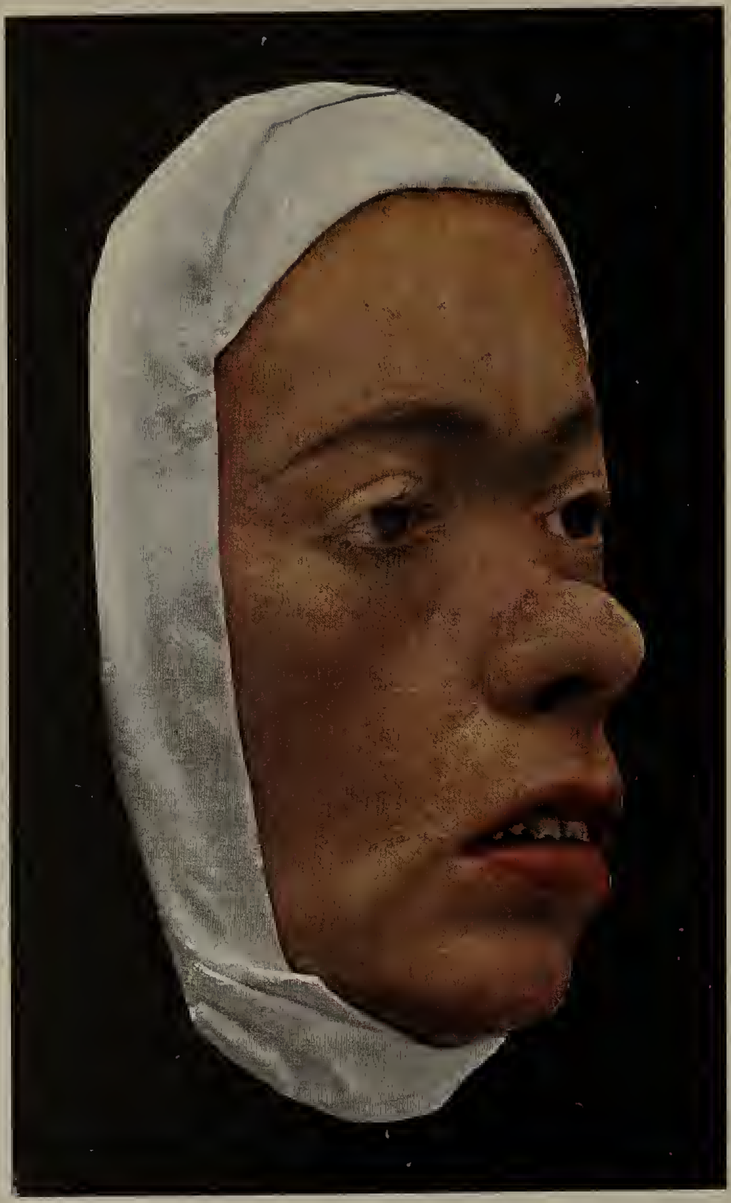


Fig. 311. Syphilis congenita ossium nasi

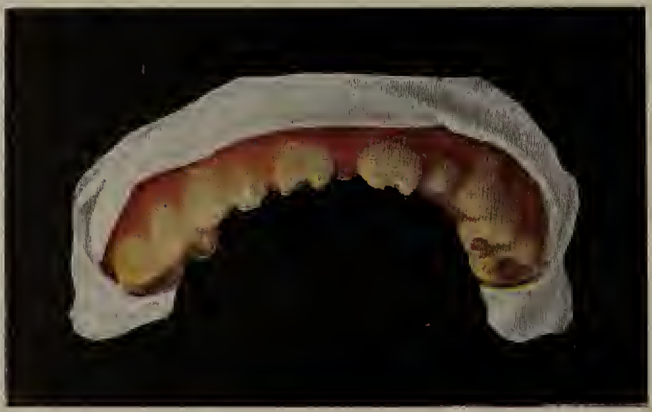


Fig. 312. Syphilis congenita dentium
(Hutchinson)

the first ten weeks of neosalvarsan treatment of syphilis in different stages, may be given in illustration:

Primary Syphilis.

	Weeks.									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Case 1,061 ..	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	–	–
Case 1,124 ..	–	+ +	–	–	–	–	–	–	–	–

Secondary Syphilis.

	Weeks.									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Case 1,048 ..	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	–	–
Case 1,157 ..	+ +	+ +	+ +	+	–					

Late Syphilis.

	Weeks.									
	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
Case 1,047 ..	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +	+ +
Case 1,121 ..	–	–	–	–	–	–	–	–	–	–

In the primary stage the disease is soon controlled by treatment, as shown by the alteration of the Wassermann reaction from positive to negative after a number of injections, as in 1,061. It will be noted in 1,124 that the Wassermann reaction, at first negative, became positive while the patient was under treatment. The writer has found that this is usually the case in primary syphilis, although it is not generally recognised, because the Wassermann reaction is not examined at sufficiently short intervals to reveal this fact. This observation may seem to invalidate the distinction usually made in favour of primary syphilis with a negative reaction as compared with primary syphilis with a positive reaction. In primary syphilis with a negative reaction the prognosis is on the whole better, not because the reaction is negative, for it usually becomes positive, but because in such cases the disease is in an earlier stage and therefore even more responsive to treatment.

In the secondary stage, as shown in 1,048 and 1,157, the disease can also be rapidly influenced by the arsenical preparations, but this is by no means always the case, and although the eruption is usually easily removed by treatment, the Wassermann reaction may remain positive for three, six, or more months. Thus the secondary stage is influenced less readily and less surely than the primary, and for this reason the sooner diagnosis is established and treatment instituted the greater the chance of cure.

In late syphilis the Wassermann reaction tends to persist in the positive phase in spite of the most vigorous and continued treatment. This does not mean that the remedies used have no effect, for it will often be found that remarkable clinical progress is made. In a gumma in the skin, for example, the lesion is completely healed after a short course of treatment, but subsequent prolonged treatment does not as a rule influence the Wassermann reaction, and is therefore possibly fulfilling no further purpose. In certain cases, and especially in syphilis of the nervous system, the Wassermann reaction may die out in the blood serum although the disease is still progressive, as shown in 1,121, where the patient suffered from active tabes. For these reasons, while there is a certain value in formulating a scheme, or schemes, for the treatment of the different phases of syphilis, every case should be considered on its merits, due consideration being given to all the accompanying circumstances.

Arsenic, mercury and bismuth are the three remedies now generally employed in the treatment of syphilis. Formerly potassium iodide was often used in gummatous conditions, but it has no effect on the Wassermann reaction, and does not influence the disease in the earlier stages. Arsenic in its original form of salvarsan or "606," was dissolved, neutralised, and administered in a considerable bulk of physiological salt solution, 300 c.c. being employed for the full dose of 0·6 gramme. It was, and is, a remedy of undoubted potency, but as the technique of its preparation and administration is very complicated, it is now rarely used in routine work. Its place has largely been taken by one of the neosalvarsan preparations injected intravenously, the full dose of 0·9 gramme being dissolved in 10 c.c. of sterile distilled water, and smaller doses in a proportionate amount. Neosalvarsan may also be given by the intramuscular method, but is then distinctly painful and less efficacious. Mercury may be administered by the mouth as the well-known Hutchinson's pill, by inunction, or by intramuscular injection. The last form is now most often employed in this country, the insoluble salts, in the form of gray oil, being generally preferred. The injection is given deeply into the muscle of the buttock, at the junction of the upper and middle thirds of a line drawn from the gluteal cleft to the anterior-superior spine. The bismuth preparations are given in a similar manner, and, as in the case of mercury, either an insoluble or a soluble preparation may be employed. The choice of the particular remedy and the form in which it is used obviously depend upon the particular circumstances of the case. The arsenical compounds are the most active, but the amount given during a certain time is limited by the tolerance of the patient. In an average case ten consecutive injections of "914" are given at intervals of seven days. Mercury is more continuous in its action and exerts a steady influence on the disease, especially when administered by intramuscular injection, which is the method of choice, although inunction carried out by a skilled operator is remarkably satisfactory. In the early days of salvarsan the hope was entertained that one injection of the original "606" would be sufficient to cure the disease. It was very soon found that a larger number of injections were necessary, and that some form of mercurial treatment should be given subsequently. In 1913 the author and the late Sir M. Morris recorded their opinion that a course of treatment extending over two years was necessary, this view being based upon their experience with the then new arsenical preparations. The form of treatment now adopted by the writer in the earlier stages—that is, during the primary and secondary periods—is as follows: Diagnosis having been established, the patient is given ten intravenous injections of neosalvarsan varying in amounts from 0·3 to 0·9 gramme. Many patients will tolerate an initial dose of 0·6 gramme, followed by nine subsequent doses of 0·9 gramme, but such a severe intensive form of dosage should only be carried out by those who have had considerable experience. As a preliminary the urine should be carefully examined, and the patient should take only a light meal some hours before the injection is given. The ten injections of neosalvarsan are followed by a course of twelve intramuscular injections of bismuth, or mercury, and then the Wassermann reaction is tested. A further course of salvarsan, limited to five injections, follows, with subsequent mercury or bismuth, the mercury or bismuth being continued with short intervals of rest until two years have elapsed. If the blood Wassermann reaction remains positive, or having been negative returns to positive, this is to be regarded as an indication for a further course of salvarsan, but in any case a minimum interval of at least twelve weeks should elapse between two consecutive courses, otherwise there is a risk of arsenical intoxication. Provided that the progress has been satisfactory, and that the Wassermann reaction has remained negative from the earlier period of treatment, at the end of the two years the patient may be regarded as cured, but it is nevertheless prudent to keep him under observation for two or three years, and to examine the cerebro-spinal fluid from three to six months after treatment has been completed. An examination of the cerebro-spinal fluid at an earlier stage has not the same value, for it then often exhibits some pathological change which may have, at this time, no especial significance.

In the later stages of syphilis a continuous intensive treatment is less often demanded. A similar initial course of neosalvarsan, followed by bismuth or mercury, is generally required, but the subsequent form of treatment depends very largely on the type of case and on the effects of the remedies used. It will thus often be found an advantage to allow a longer interval to elapse between each course of injections of arsenic and bismuth or mercury, and to continue treatment, with intervals, over a longer period with the object of arresting the progress of the disease.

The complication of neosalvarsan may be immediate, in the form of syncope and the nitritoid crisis, or remote, including jaundice and exfoliative dermatitis. Diarrhœa and vomiting and a febrile reaction are also sometimes observed. The immediate complications, which may be very alarming, are treated by small injections of adrenalin, and the later by purified sodium thiosulphate given intravenously in doses of 0·6 to 0·9 gramme in 10 c.c. distilled water. Diarrhœa and fever are, as a rule, only temporary phenomena, and require no special attention. Sodium thiosulphate has also proved a very useful remedy in the treatment of the forms of mercurial or bismuth poisoning developing in patients to whom these drugs are being administered.

Treatment of Congenital Syphilis

Congenital syphilis can be prevented by treating the pregnant mother, and this is far more satisfactory than attempting to cure the disease when it has manifested itself in the child. The infected mother, in whom the diagnosis has been established, should be treated up to the last month of pregnancy by intravenous and intramuscular medication. Where this has not been done and the disease manifests itself in the child neosalvarsan injections may be given commencing with 0·02 gramme, the solution being introduced into one of the accessible veins in the scalp, which is caused to stand out prominently with the help of an assistant. Where this is impracticable or impossible, gray powder may be given by the mouth; in other cases one of the bismuth compounds may be injected intramuscularly in suitable doses. In older children the dose of neosalvarsan, bismuth, or mercury is regulated in accordance with the patient's age, treatment being carried out on a plan similar to that employed in the adult in the later stages. Prevention is better than cure, and therefore in all cases the mother in whom syphilitic infection has been discovered should be kept under supervision and adequately treated during every pregnancy.

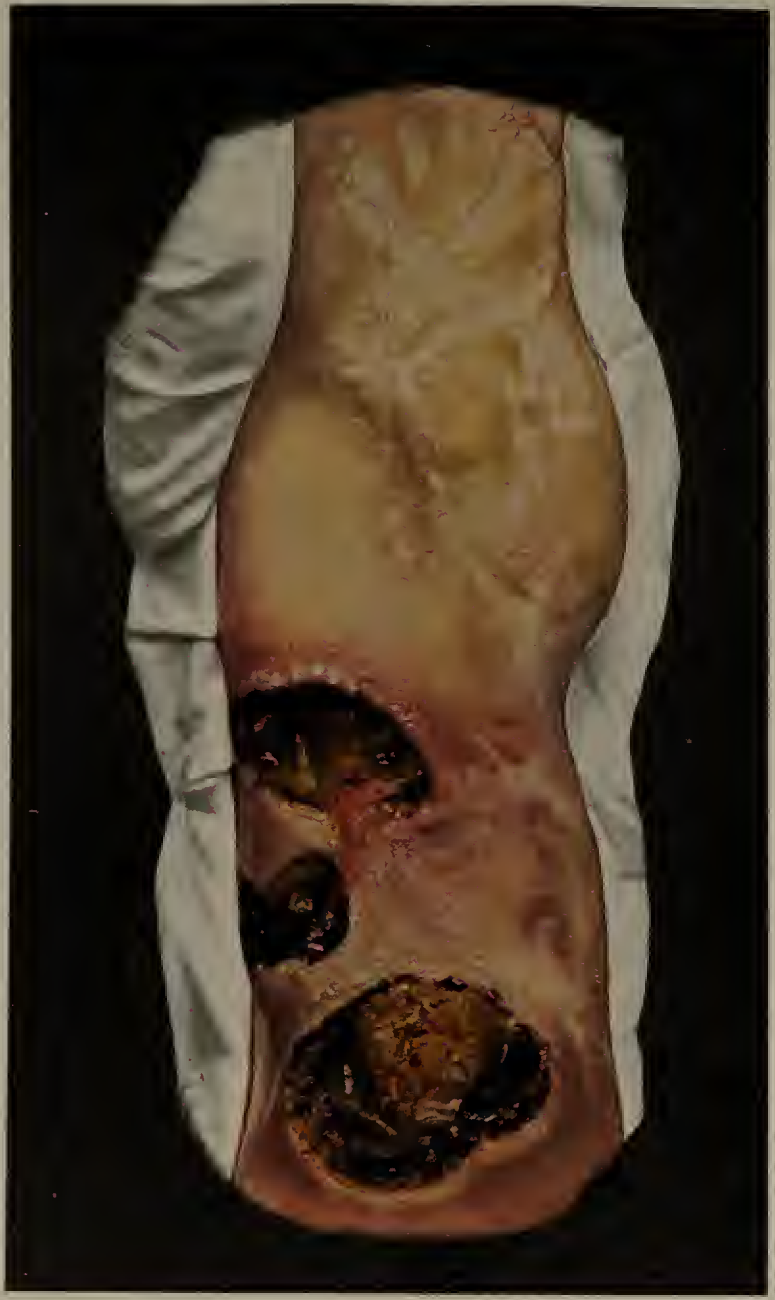


Fig. 313. Syphilis congenita gummosa (“tarda”)

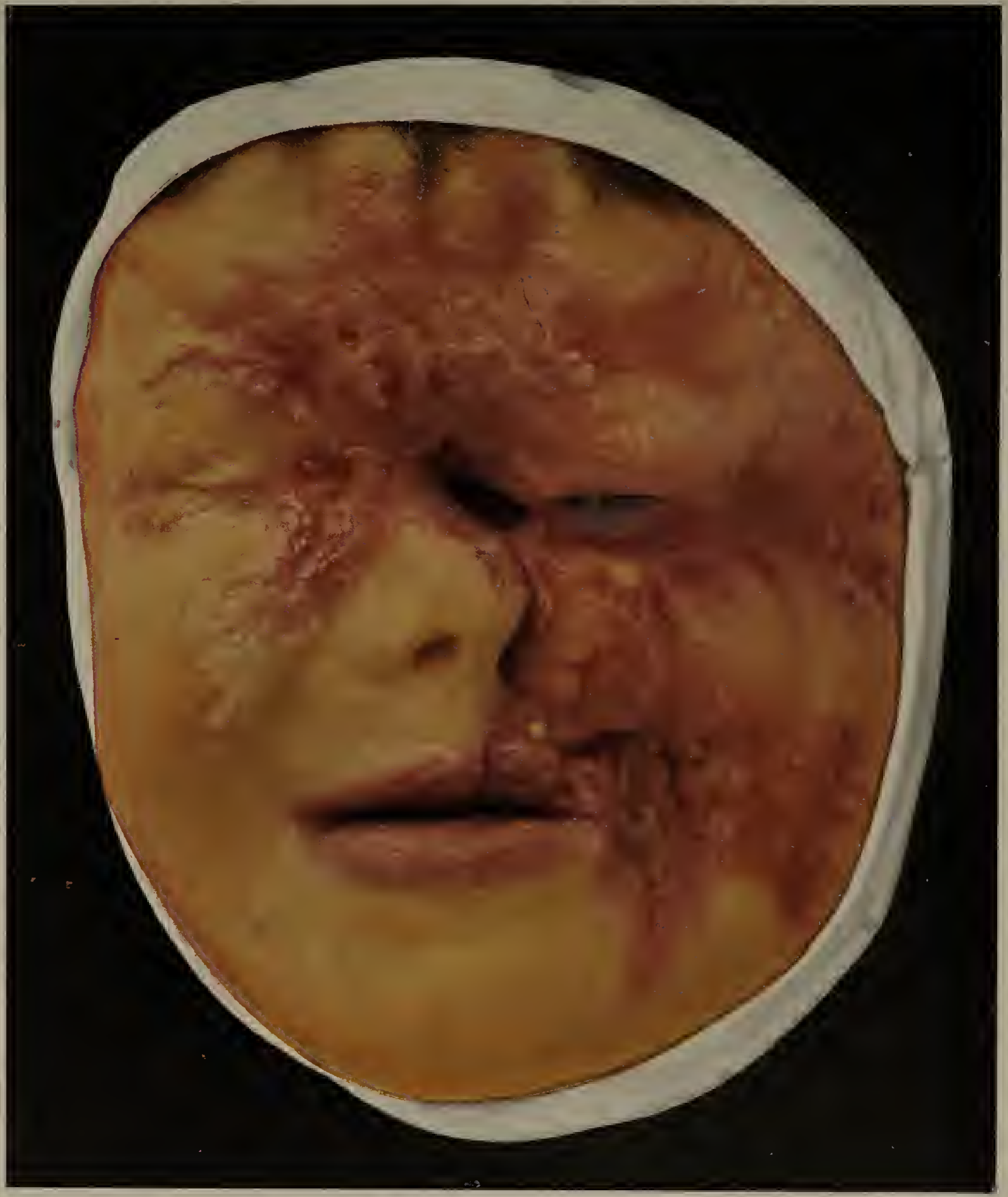


Fig. 314. Syphilis congenita cutis et ossium faciei (“tarda”)

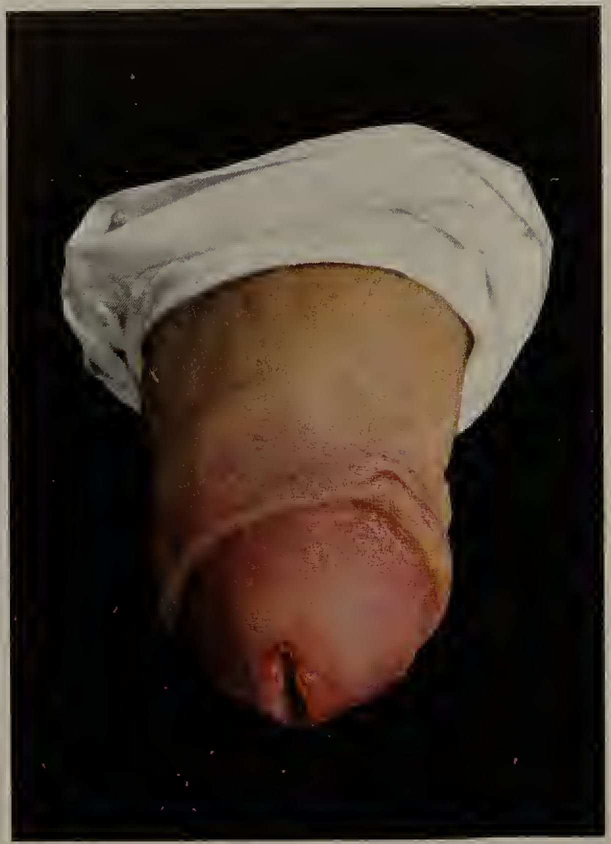


Fig. 315. Ulcus molle orificii urethrae

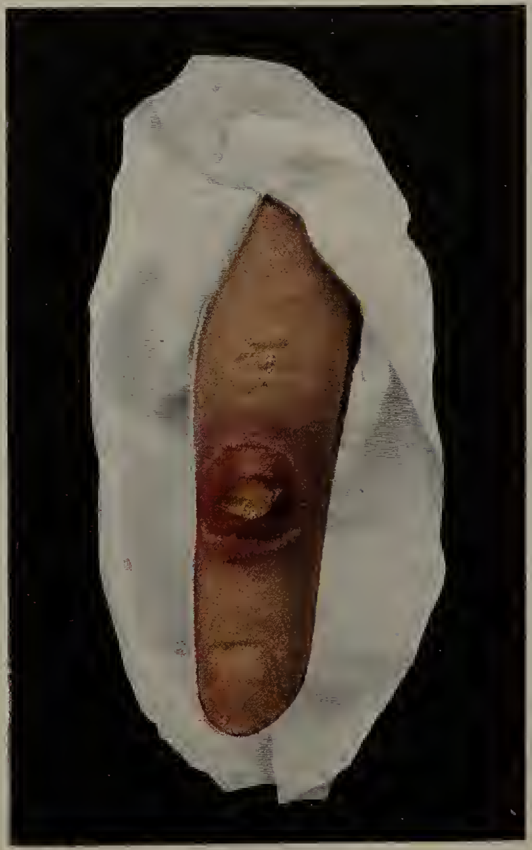


Fig. 316. Ulcus molle digiti

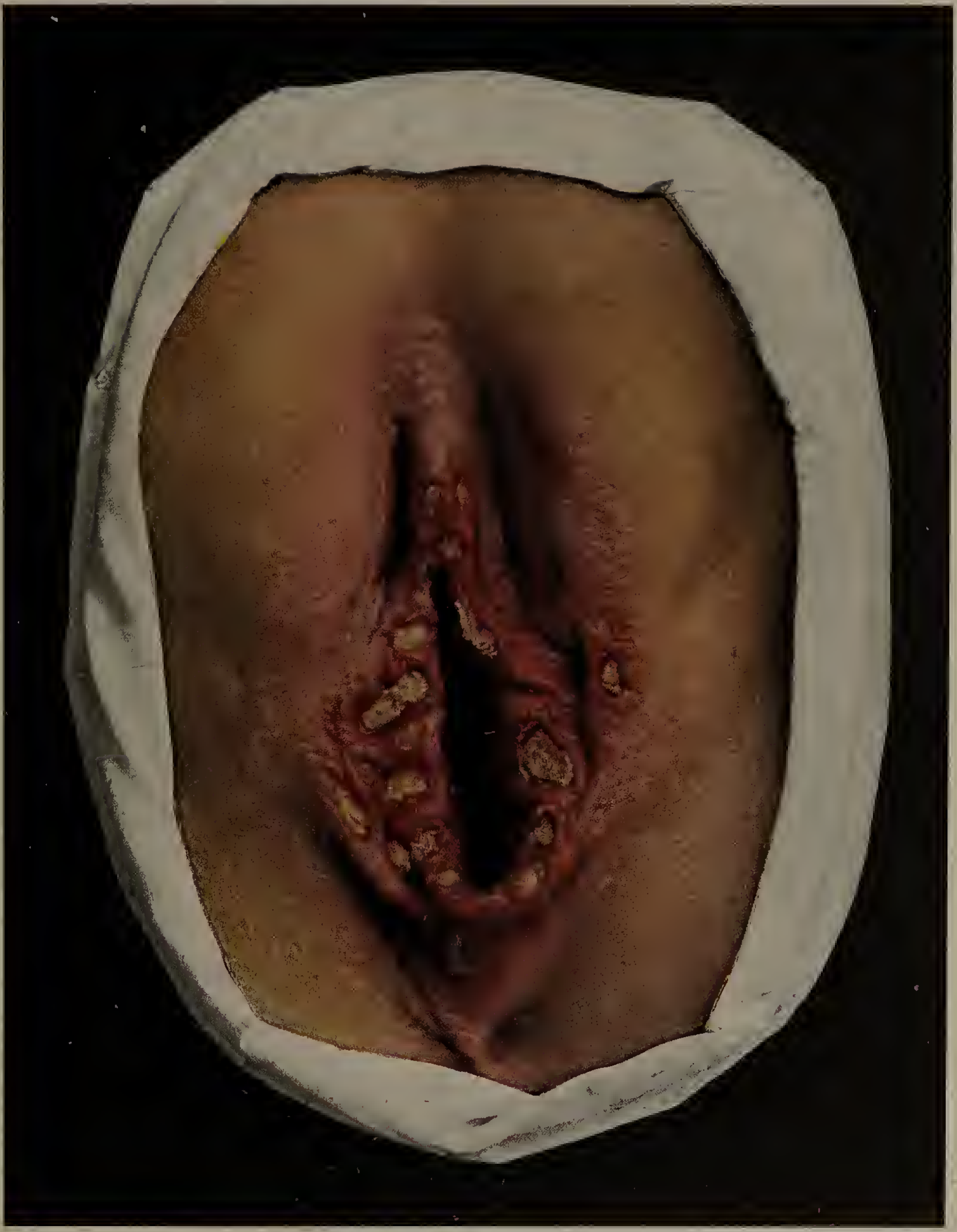


Fig. 317. Ulcera mollia vulvae

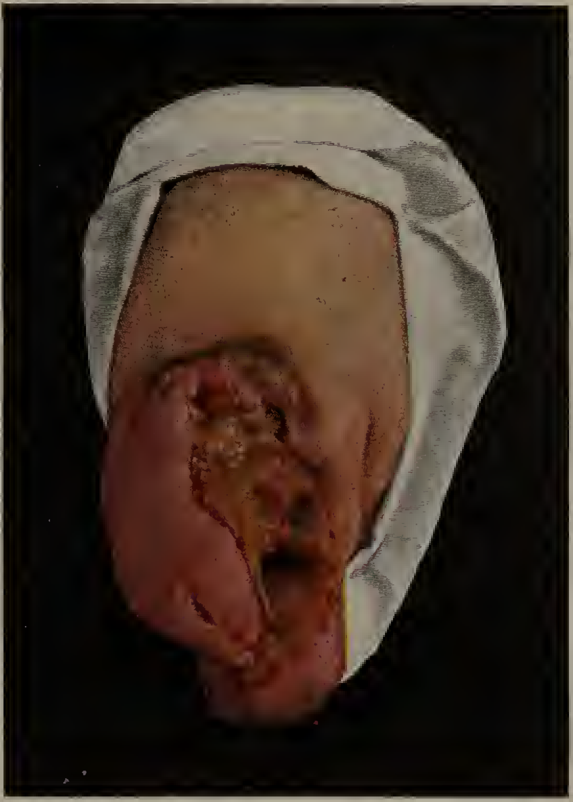


Fig. 318. Ulcus molle phagedaenicum

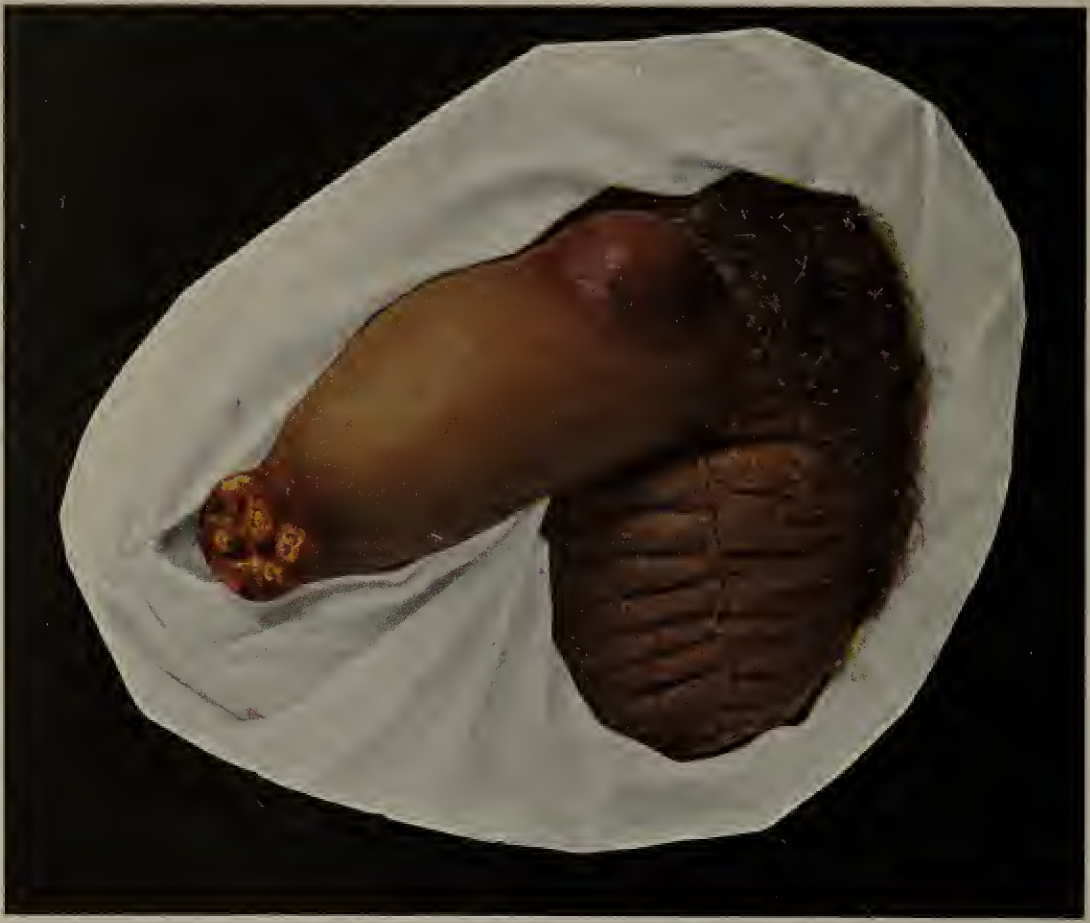


Fig. 319. Ulcera mollia praeputii; Bubonulus

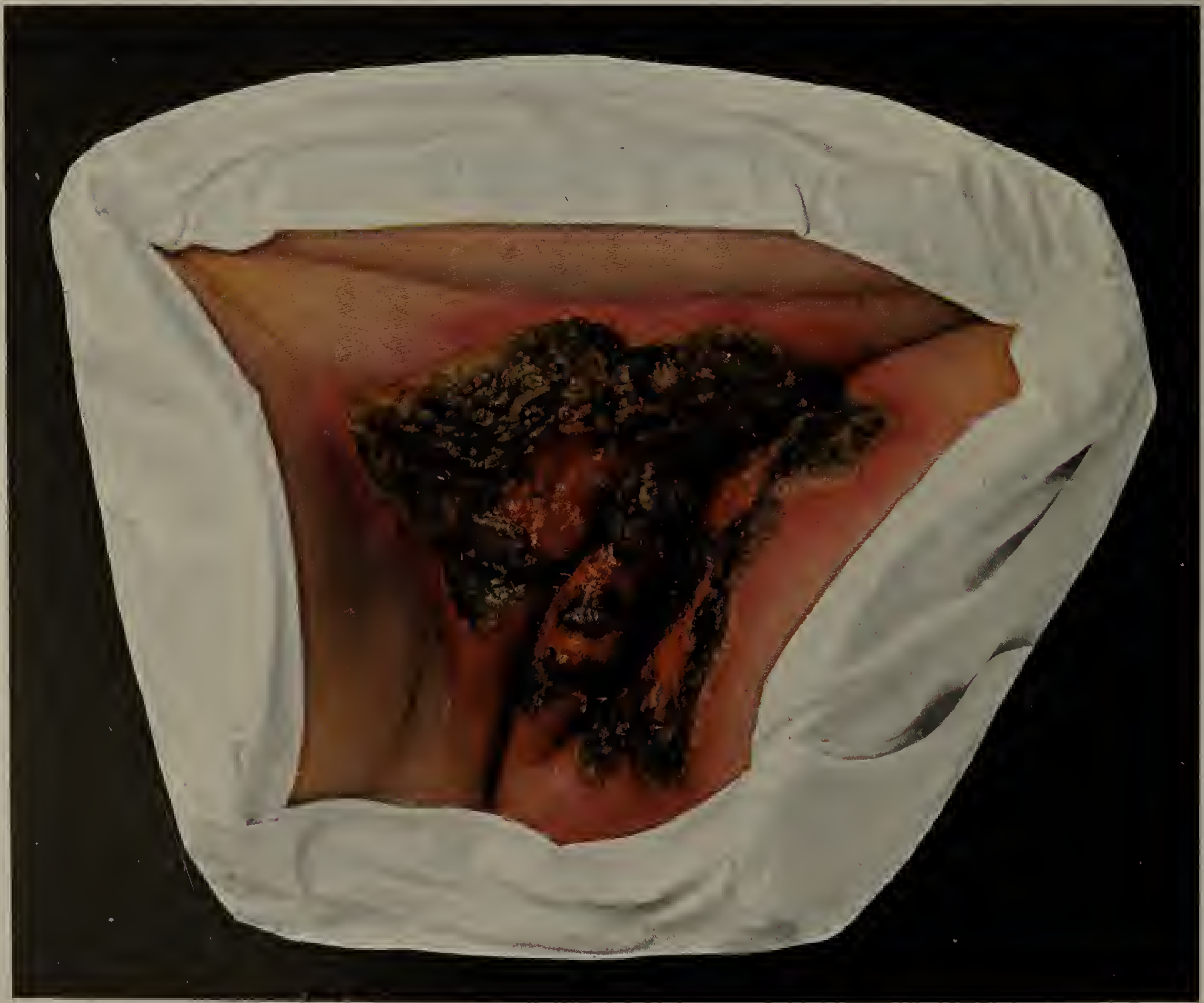


Fig. 320. Ulcus molle gangraenosum

Ulcus Molle (Plates 166 to 168, Figs. 315 to 320)

Ulcus molle, the soft or non-syphilitic sore, is generally stated to be caused by Ducrey's bacillus, a short Gram-negative organism arranged in the pus in chains and pairs; in many cases, however, none but the ordinary pyogenetic organisms can be discovered, and some at least of the conditions termed ulcus molle can only be attributed to a mixed infection with these common pyococci. The incubation period is short, usually three to ten days, after which one sore, or more often a number of sores, appear on the genital organs. As in syphilis, infection may occur in other situations, such as the finger (Fig. 316), for no region of the body is exempt; further, the sores are both inoculable and auto-inoculable. The soft sore differs from the syphilitic chancre in being a true ulcer with an irregular purulent base, surrounded by a distinct area of inflammation. Its edge is irregular and undermined, in contrast to the perfect contour of the syphilitic sore. Soft sores are usually multiple and, as the name implies, are not indurated. There is a special tendency for the infection to spread to the neighbouring lymphatic glands, which often suppurate (bubo), and may break down, forming an intractable ulcerated area; or the lymphangitis may remain localised to the dorsal surface of the penis, and there occasion the bubonulus or Nisbet's chancre (Fig. 319). The soft sore, like the syphilitic, sometimes becomes phagedænic or gangrenous (Figs. 318 and 320), the process spreading rapidly with marked destruction of tissue. In such cases fusiform bacilli and spirochætes similar to, if not identical with, those found in Vincent's disease of the mouth are almost invariably present.

Treatment.—When the soft sore is concealed beneath a tight prepuce, it should be exposed by circumcision or by a dorsal incision, measures which are not only demanded for the purposes of treatment, but which also considerably lessen the chance of phagedæna. The local treatment of the sore includes antiseptics, such as eusol, applied constantly after a preliminary cleansing with a dilute solution of peroxide of hydrogen. In markedly infected and offensive cases acriflavine, 1 in 1,000, may be used as a wet dressing. In Mill's method sublimed sulphur is rubbed into the sore at frequent intervals with the tip of the finger, a form of treatment often successful if conscientiously carried out. Incision of the suppurating inguinal glands, although sometimes necessary, has the disadvantage of being followed by the chronic ulcer referred to above. This complication may in some cases be avoided by aspirating the purulent contents with a syringe, care being taken not to plunge the needle through thinned and inflamed skin where the abscess is pointing.

Balanitis (Plate 169, Fig. 322)

Balanitis, or balano-posthitis, implies a superficial inflammation of the glans (balanitis) or of the inner surface of the prepuce (posthitis). The condition is usually due to the retention of irritating matter, and is therefore especially associated with a tight prepuce and with gonorrhœa. The affected surfaces become red, inflamed and superficially eroded, and there is an accompanying fœtid discharge. Cleanliness and the application of some mild antiseptic is usually sufficient to cure the condition in simple cases. Erosive or gangrenous balanitis (Fig. 322) is a special form of the disease, generally, but not invariably, of venereal origin. It is probably caused by the *Bacillus fusiformis* and spirochæte of Vincent. Circinate erosions of considerable extent, and smaller similar lesions, develop on the glans and sulcus, becoming sometimes converted into black, sloughing, gangrenous areas. There is a markedly offensive discharge, and there may be considerable and rapid destruction of tissue. The condition is painful but, although the glands in the inguinal region are enlarged, they do not as a rule suppurate.

Treatment.—Treatment consists of very frequent irrigation with a 2 per cent. solution of peroxide of hydrogen; if necessary, the prepuce must be slit up by a dorsal incision to expose the inflamed, and possibly gangrenous, regions, which are freely washed with peroxide of hydrogen (Browning and Watson).

Keratodermia Blenorrhagica (Plate 169, Fig. 321)

Keratodermia blenorrhagica, or gonorrhœal keratosis, is a remarkably rare disease; when it occurs, it is invariably associated with some severe form of gonorrhœal infection, such as arthritis. The eruption is most often observed over the soles and palms, but may, in very exceptional cases, be widely distributed over the body. The actual lesions consist of circumscribed, thickened, horny or crusted cones, which have been compared, in their fully developed form, to the mountains on a relief map (Fig. 321). Gonococci have been found in the lesions, and an accompanying thickening of the nails is common. In Sequeira's case, the first to be described in Great Britain, the lesions extended from the soles on to the dorsal surfaces of the feet.

Treatment.—The administration of gonococcal vaccines, and the treatment of the causal gonococcal infection, produces a favourable effect on the eruption with comparative rapidity.

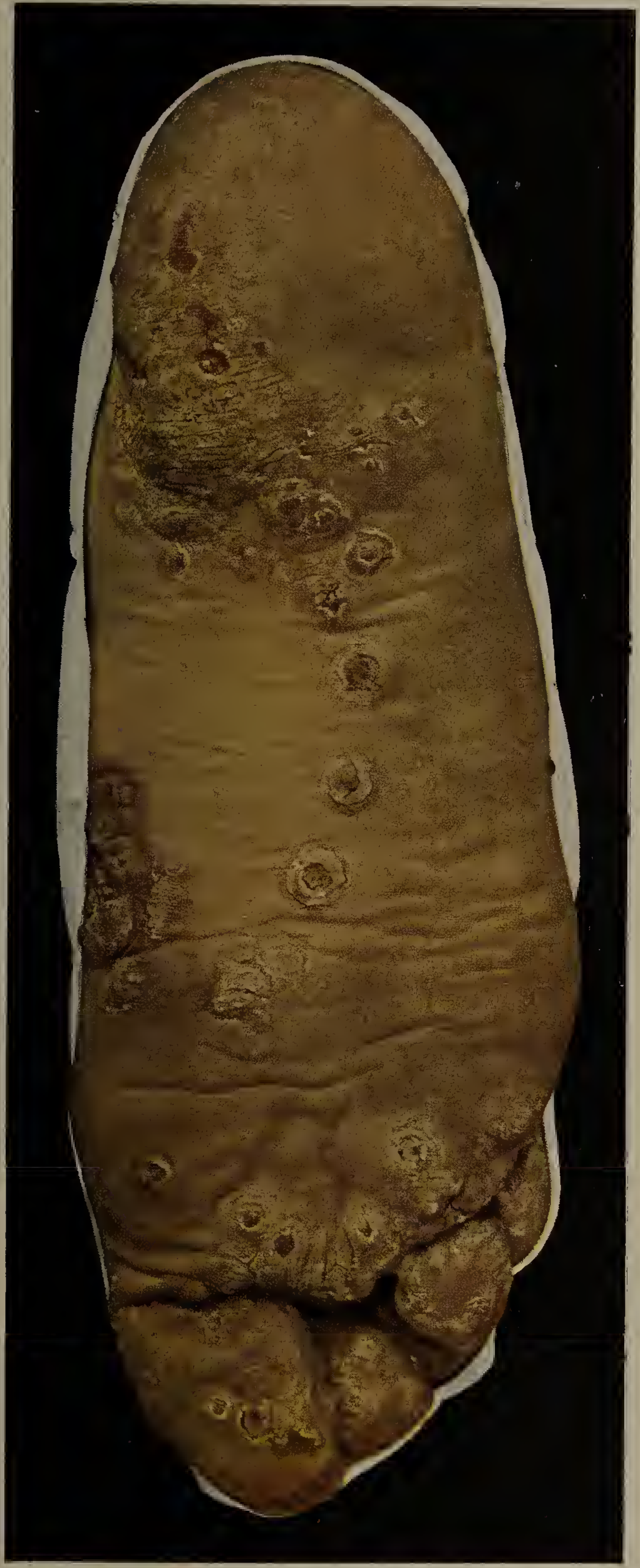


Fig. 321. Keratodermia blenorrhagica

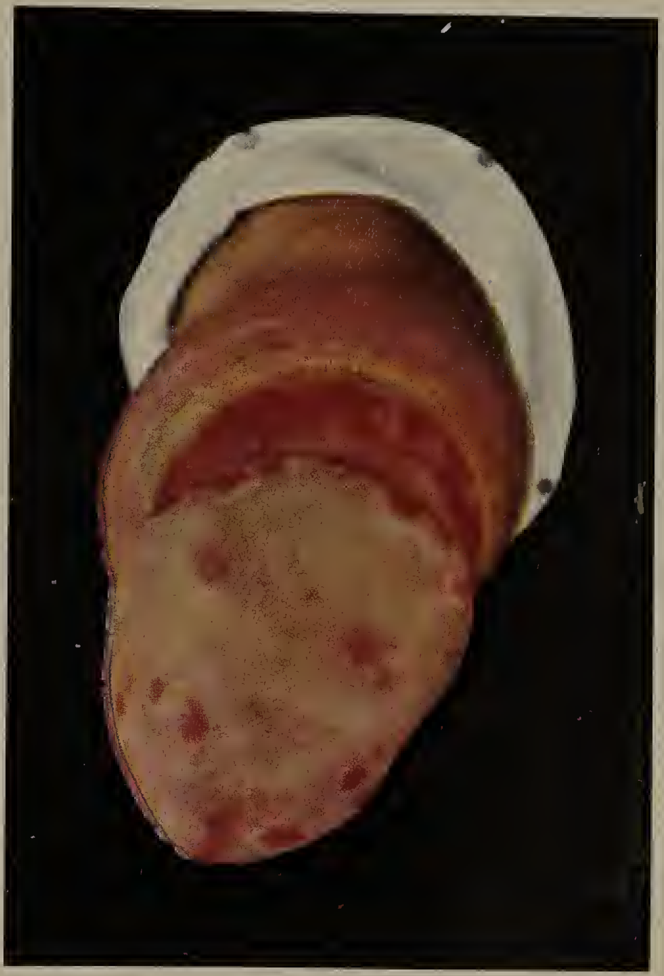


Fig. 322. Balanitis circinata erosiva

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